Oracle Access Manager Integration
Oracle FLEXCUBE Investor Servicing
Release 12.0.4.0.0
September 2014

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1. Preface

1.1 Introduction

This manual discusses the integration of Oracle FLEXCUBE Investor Servicing and the Oracle Access Manager system**.** The configurations required for proper functioning of this integration and further processing are documented in this manual.

1.2 Audience

This manual is intended for the following User/User Roles:

Role	Function
Back office data entry Clerks	Input functions for maintenance related to the interface.
Implementation team	Implementation of Oracle FLEXCUBE Investor Servicing

1.3 Abbreviations

Abbreviation	Description
System	Unless specified, it shall always refer to Oracle FLECUBE
OAM	Oracle Access Manager
IS	Investor Servicing
SSO	Single Sign-on
LDAP	Lightweight Directory Access Protocol

1.4 Documentation Accessibility

For information about Oracle's commitment to accessibility, visit the Oracle Accessibility Program website at http://www.oracle.com/pls/topic/lookup?ctx=acc&id=docacc.

1.5 Organization

This manual is organized into the following chapters:

Chapter 1	*Preface* gives information on the intended audience. It also lists the various chapters covered in this User Manual.
Chapter 2	*Enabling Single Sign-on (SSO) with Oracle Access Manager* discusses the method to integrate Oracle FLEXCUBE with Oracle Access Manager for Single Sign-on.

1.6 Glossary of Icons

This User Manual may refer to all or some of the following icons.

Icons	Function
	Exit
	Add row
	Delete row
	Option List

1.6.1 Related Documents

You may refer the following manual for more information

- Oracle Access Manager User Manual (not included with Oracle FLEXCUBE User Manuals)

2. Enabling Single Sign-on with Oracle Access Manager

2.1 Introduction

For the purpose of single sign-on FLEXCUBE is qualified with Oracle Identity Management 11.1.2 (Fusion Middleware 11gR2) – specifically using the Access Manager component of Oracle Identity Management. This feature is available in FLEXCUE since the release FC IS V.UM 7.3.0.0.0.0.0 .

This document provides an understanding as to how single sign-on can be enabled for a FLEXCUBE deployment using Oracle Fusion Middleware 11gR2.

In addition to providing a background to the various components of the deployment, this document also talks about Configuration to be done in FLEXCUBE and Oracle Access Manager to enable single sign-on using Oracle Internet Directory as a LDAP server.

2.2 Background and Prerequisites

2.2.1 Software Requirements

Oracle Identity and Access Management 11g R2 - 11.1.2.2.0

- Oracle Access Manager – 11.1.2.2.0
- Oracle Fusion Middleware Web Tier Utilities 11g Patch Set 6 - 11.1.1.7.0
  - Oracle HTTP Server
- Oracle Access Manager OHS 11gR2 WebGates - 11.1.2.2.0
- Oracle Access Manager patch set – 18333689, 19269297, 18662903
- Optional: Oracle Adaptive Access Manager – 11.1.2.2.0 (Strong Authentication purpose only)

Note *: In case of **java.security.InvalidKeyException: Illegal key size** error in Admin Server, while starting the OAM Server based applications, then refer Oracle Support Document ID: 1901181.1.

LDAP Directory Server

Please make sure that the LDAP server to be used for FLEXCUBE Single Sign on deployment is certified to work with OAM.

List of few LDAP Directory servers supported as per OAM document (note – this is an indicative list. The conclusive list can be obtained from the Oracle Access Manager documentation. Though we have only use OID for our testing purposes):

- Oracle Internet Directory
- Active Directory
- ADAM
- ADSI
- Data Anywhere (Oracle Virtual Directory)
- IBM Directory Server
- NDS

- Sun Directory Server

Oracle Weblogic (10.3.6)

For the purpose of achieving single sign on for FLEXCUBE in FMW 11gR2, it is necessary for the weblogic instance to have an explicit **Oracle HTTP server (OHS).**

2.3 Background of SSO related components

2.3.1 Oracle Access Manager (OAM)

Oracle Access Manager consists of the Access System and the Identity System. The Access System secures applications by providing centralized authentication, authorization and auditing to enable single sign-on and secure access control across enterprise resources. The Identity System manages information about individuals, groups and organizations. It enables delegated administration of users, as well as self-registration interfaces with approval workflows. These systems integrate seamlessly.

The backend repository for the Access Manager is an LDAP-based directory service that can be a combination of a multiple directory servers, which is leveraged for two main purposes:

- As the store for policy, configuration and workflow related data, which is used and managed by the Access and Identity Systems
- As the identity store, containing the user, group and organization data that is managed through the Identity System and is used by the Access System to evaluate access policies.

2.3.2 LDAP Directory Server

To integrate Flexcube with OAM to achieve Single Sign-on feature, Flexcube's password policy management, like password syntax and password expiry parameters will no longer be handled by Flexcube. Instead, the password policy management can be delegated to the Directory Server. All password policy enforcements would be on the LDAP user id's password and NOT Flexcube application users' passwords.

2.3.3 WebGate/AccessGate

A WebGate is a Web server plug-in that is shipped out-of-the-box with Oracle Access Manager. The WebGate intercepts HTTP requests from users for Web resources and forwards it to the Access Server for authentication and authorization.

Whether you need a WebGate or an AccessGate depends on your use of the Oracle Access Manager Authentication provider. For instance, the:

Identity Asserter for Single Sign-On: Requires a separate WebGate and configuration profile for each application to define perimeter authentication. Ensure that the Access Management Service is On**.**

Authenticator or Oracle Web Services Manager: Requires a separate AccessGate and configuration profile for each application. Ensure that the Access Management Service is On**.**

2.3.4 Oracle Adaptive Access Manager

Oracle Adaptive Access Manager provides an innovative, comprehensive feature set to help organizations prevent fraud and misuse. Strengthening standard authentication mechanisms, innovative risk-based challenge methods, intuitive policy administration and integration across the Identity and Access Management Suite and with third party products make Oracle Adaptive Access Manager uniquely flexible and effective. Oracle Adaptive Access Manager provides real-time and batch risk analytics to combat fraud and misuse across multiple channels of access. Real-time evaluation of multiple data types helps stop fraud as it occurs. Oracle Adaptive Access Manager makes exposing sensitive data, transactions and business processes to consumers, remote employees or partners via your intranet and extranet safer.

Oracle Adaptive Access Manager provides an extensive set of capabilities including device fingerprinting, real-time behavioral profiling and risk analytics that can be harnessed across both Web and mobile channels. It also provides risk-based authentication methods including knowledge-based authentication (KBA) challenge infrastructure with Answer Logic and OTP Anywhere server-generated one-time passwords, delivered out of band via Short Message Service (SMS), e-mail or Instant Messaging (IM) delivery channels. Oracle Adaptive Access Manager also provides standard integration with Oracle Identity Management, the industry leading identity management and Web Single Sign-On products, which are integrated with leading enterprise applications.

2.4 Configuration

2.4.1 Pre-requisites

- The steps provided below assume that FLEXCUBE has already been deployed and is working (without single sign-on)
- The below provided steps assume that Oracle Access Manager and the LDAP server have been installed already and the requisite setup are already done with respect to connecting the two along with Weblogic's Identity Asserter.

2.5 Enabling SSL for Weblogic and OAM Console

2.5.1 Self-signed Certificate Creation:

To enable SSL mode, WebLogic requires a keystore which contains private and trusted certificates. We have to use the same version of JDK (which is used by Weblogic Domain) to create the keystore and certificates, otherwise it may lead to many difficulties (suggested by Oracle Support).

Keytool utility available in Java JDK will be used to create Keystore. In command prompt set PATH to the JDK\bin location. Follow the below steps to create keystore and self-signed certificates:

2.5.1.1 Keystore Creation

keytool -genkey -keystore <keystore_name.jks> -alias <alias_name> -dname "CN=<hostname>, OU=<Organization Unit>, O=<Organization>, L=<Location>, ST=<State>, C=<Country_Code>" -keyalg <Key Algorithm> -sigalg <Signature Algorithm> -keysize <key size> -validity <Number of Days> -keypass <Private key Password> -storepass <Store Password>

For example:

keytool -genkey -keystore AdminFlexcubeKeyStore.jks -alias FlexcubeCert -dname "CN=ofss00001.in.oracle.com, OU=OFSS, O=OFSS, L=Chennai, ST=TN, C=IN" -keyalg "RSA" -sigalg "SHA1withRSA" -keysize 2048 -validity 3650 -keypass Password@123 -storepass Password@123

Note: **CN=ofss00001.in.oracle.com** is the Host Name of the weblogic server

2.5.1.2 Export private key as certificate

keytool -export -v -alias <alias_name> -file <export_certificate_file_name_with_location.cer> -keystore <keystore_name.jks> > -keypass <Private key Password> -storepass <Store Password>

For example:

keytool -export -v -alias FlexcubeCert -file AdminFlexcubeCert.cer -keystore AdminFlexcubeKeyStore.jks -keypass Password@123 -storepass Password@123

If successful the following message will be displayed :

Certificate stored in file < AdminFlexcubeCert.cer>

2.5.1.3 Import as trusted certificate

keytool -import -v -trustcacerts -alias rootcacert -file <export_certificate_file_name_with_location.cer> -keystore <keystore_name.jks> > -keypass <Private key Password> -storepass <Store Password>

For example:

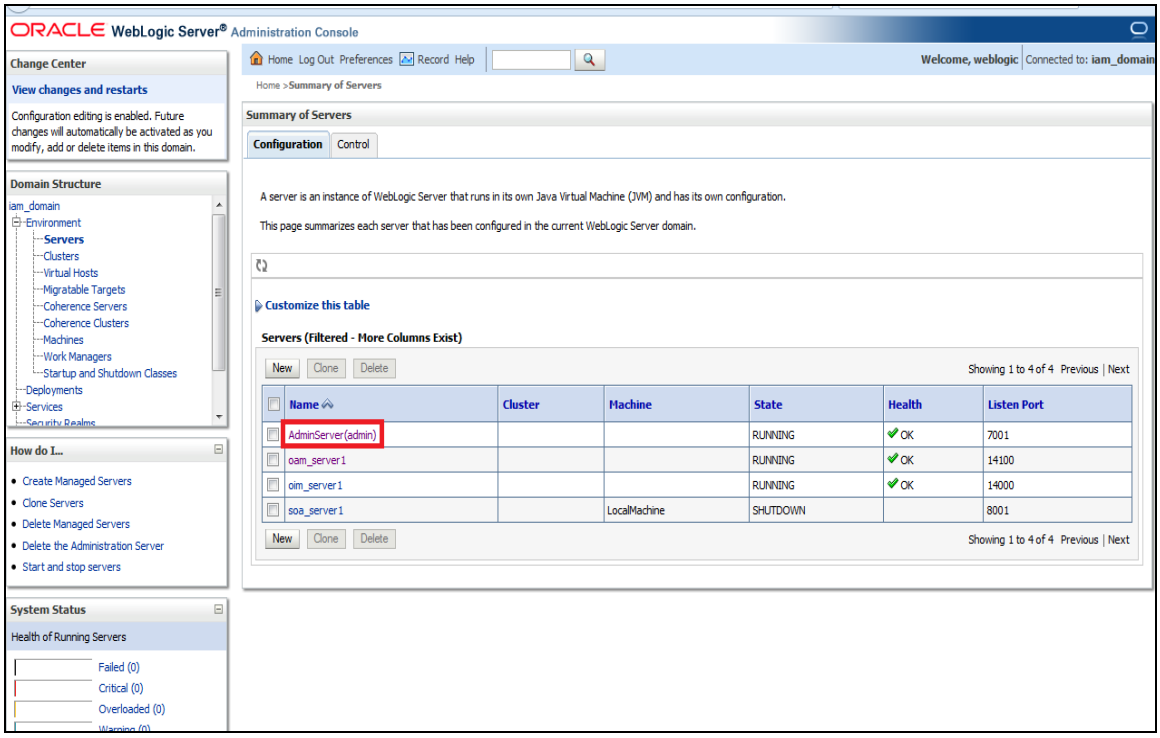
keytool -import -v -trustcacerts -alias rootcacert -file AdminFlexcubeCert.cer -keystore AdminFlexcubeKeyStore.jks -keypass Password@123 -storepass Password@123

References: Oracle Support Articles (Article ID 1281035.1, Article ID 1218695.1), in case of Certificates issued by the Trusted Authorities

2.5.2 Configuring Weblogic Console

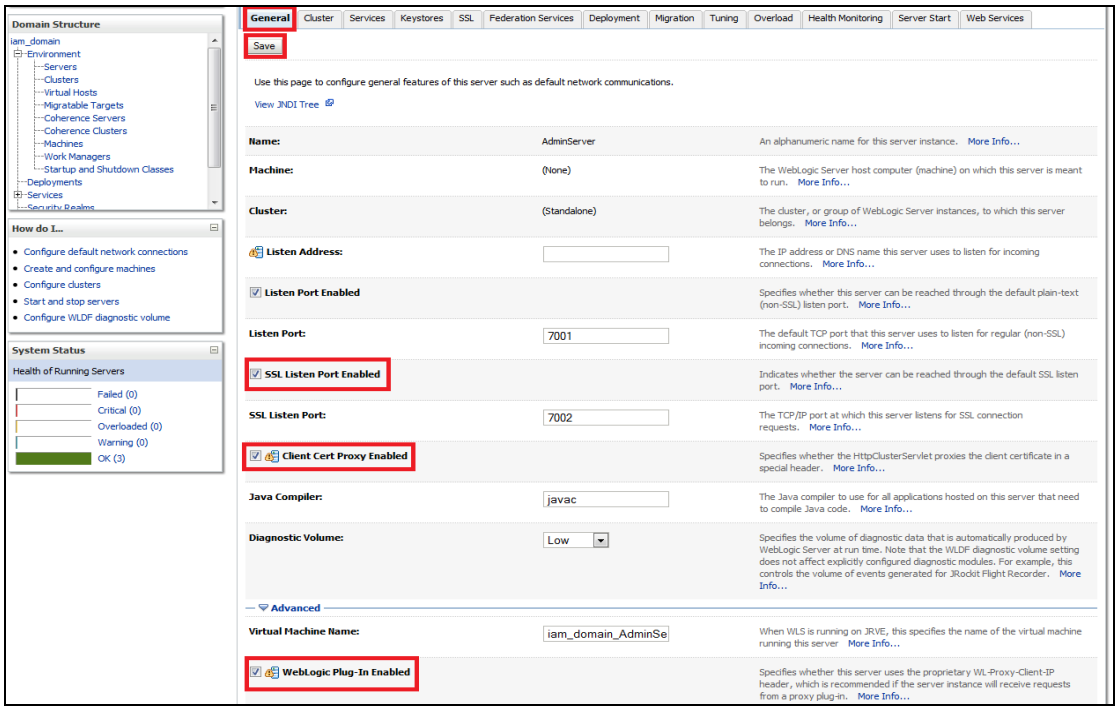
After domain creation, follow the below steps to enable SSL in weblogic Admin server and OAM Server.

2.5.2.1 Select Admin Server to enable SSL options


ORACLE WebLogic Server® Administration Console
Change Center
View changes and restarts
Configuration editing is enabled. Future changes will automatically be activated as you modify, add or delete items in this domain.
Domain Structure
iam_domain
Environment
Servers
Clusters
Virtual Hosts
Migratable Targets
Coherence Servers
Coherence Clusters
Machines
Work Managers
Startup and Shutdown Classes
Deployments
Services
How do I...
Create Managed Servers
Clone Servers
Delete Managed Servers
Delete the Administration Server
Start and stop servers
System Status
Health of Running Servers
Failed (0)
Critical (0)
Overloaded (0)
Home Log Out Preferences Record Help
Welcome, weblogic Connected to: iam_domain
Home >Summary of Servers
Summary of Servers
Configuration Control
A server is an instance of WebLogic Server that runs in its own Java Virtual Machine (JVM) and has its own configuration.
This page summarizes each server that has been configured in the current WebLogic Server domain.
Customize this table
Servers (Filtered - More Columns Exist)
New Clone Delete
Showing 1 to 4 of 4 Previous | Next
Name Cluster Machine State Health Listen Port
AdminServer(admin) RUNNING OK 7001
oam_server1 RUNNING OK 14100
oim_server1 RUNNING OK 14000
soa_server1 LocalMachine SHUTDOWN 8001
New Clone Delete
Showing 1 to 4 of 4 Previous | Next

2.5.2.2 Follow the steps in General Tab as shown below:

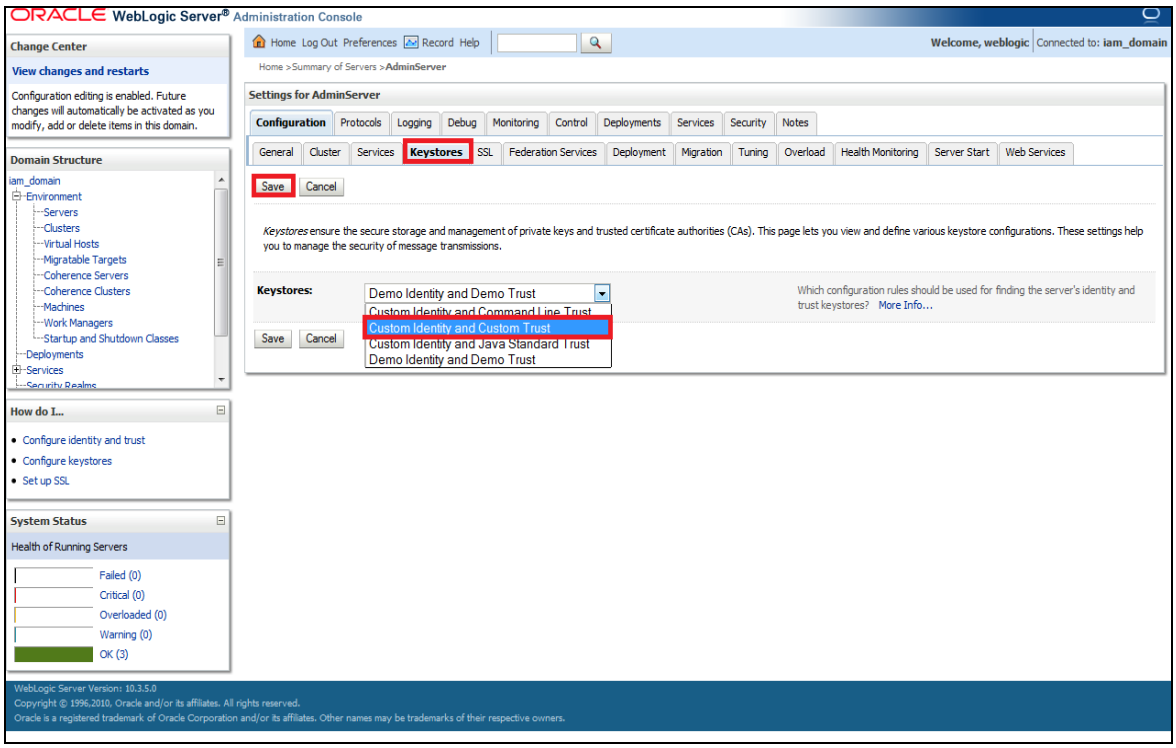
1. Select SSL Listen Port Enabled, Client Cert Proxy Enabled, Weblogic Plug-In Enabled.
2. Click on Save.


Domain Structure
iam_domain
Environment
Servers
Clusters
Virtual Hosts
Migratable Targets
Coherence Servers
Coherence Clusters
Machines
Work Managers
Startup and Shutdown Classes
Deployments
Services
Security Realms
How do I...
Configure default network connections
Create and configure machines
Configure clusters
Start and stop servers
Configure WLDF diagnostic volume
System Status
Health of Running Servers
Failed (0)
Critical (0)
Overloaded (0)
Warning (0)
OK (3)
General
Cluster
Services
Keystores
SSL
Federation Services
Deployment
Migration
Tuning
Overload
Health Monitoring
Server Start
Web Services
Save
Use this page to configure general features of this server such as default network communications.
View JNDI Tree
Name:
AdminServer
An alphanumeric name for this server instance. More Info...
Machine:
(None)
The WebLogic Server host computer (machine) on which this server is meant to run. More Info...
Cluster:
(Standalone)
The cluster, or group of WebLogic Server instances, to which this server belongs. More Info...
Listen Address:
The IP address or DNS name this server uses to listen for incoming connections. More Info...
Listen Port Enabled
Specifies whether this server can be reached through the default plain-text (non-SSL) listen port. More Info...
Listen Port:
7001
The default TCP port that this server uses to listen for regular (non-SSL) incoming connections. More Info...
SSL Listen Port Enabled
Indicates whether the server can be reached through the default SSL listen port. More Info...
SSL Listen Port:
7002
The TCP/IP port at which this server listens for SSL connection requests. More Info...
Client Cert Proxy Enabled
Specifies whether the HttpClusterServlet proxies the client certificate in a special header. More Info...
Java Compiler:
javac
The Java compiler to use for all applications hosted on this server that need to compile Java code. More Info...
Diagnostic Volume:
Low
Specifies the volume of diagnostic data that is automatically produced by WebLogic Server at run time. Note that the WLDF diagnostic volume setting does not affect explicitly configured diagnostic modules. For example, this controls the volume of events generated for JRockit Flight Recorder. More Info...
Advanced
Virtual Machine Name:
iam_domain_AdminSe
When WLS is running on JRVE, this specifies the name of the virtual machine running this server More Info...
WebLogic Plug-In Enabled
Specifies whether this server uses the proprietary WL-Proxy-Client-IP header, which is recommended if the server instance will receive requests from a proxy plug-in. More Info...

2.5.2.3 Follow the steps in Keystores Tab as shown below:

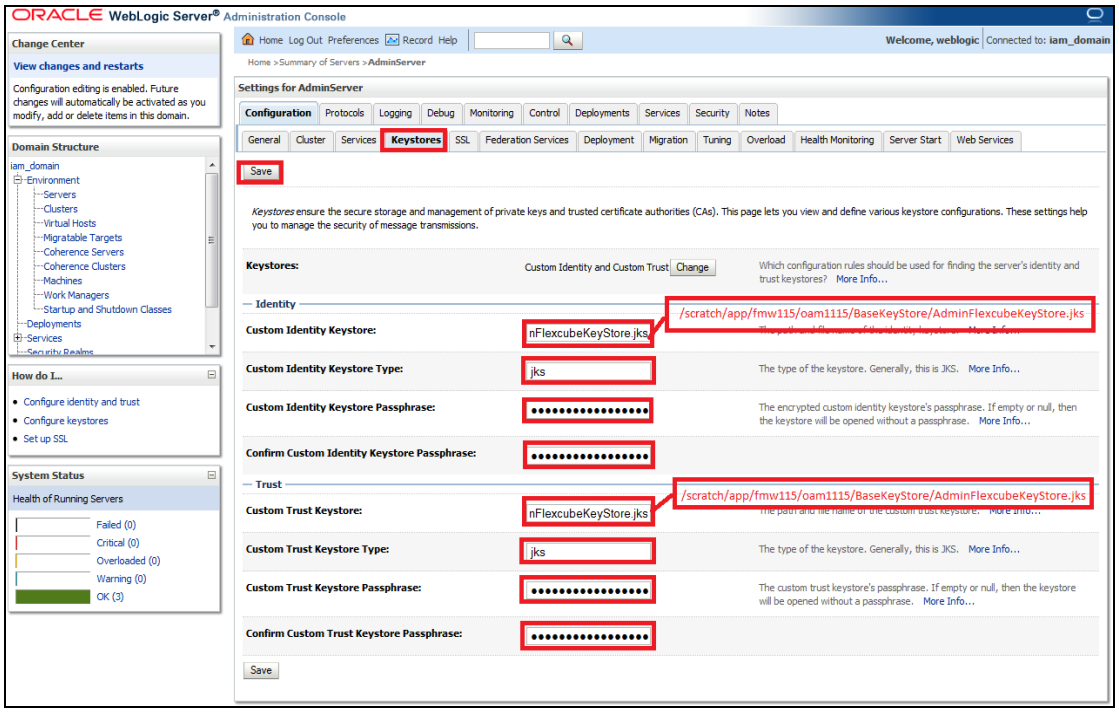
1. Click Change and select Keystores as Custom Identity and Custom Trust.
2. Click on Save.

   Keystores as Custom Identity and Custom Trust is as suggested by Oracle Support Team.



2.5.2.4 Follow the steps in Keystores Tab as shown below:

1. Enter Custom Identity Keystore and Custom Trust Keystore same as the Keystore Name created in step 3.2.1.1 with full path.
2. Enter Custom Identity Keystore Type and Custom Trust Keystore Type as jks.
3. Enter Custom Identity Keystore Passphrase, Confirm Custom Identity Keystore Passphrase, Custom Trust Keystore Passphrase and Confirm Custom Trust Keystore Passphrase same as the Store Password entered in step 3.2.1.1.
4. Click on Save.


ORACLE WebLogic Server® Administration Console
Change Center
View changes and restarts
Configuration editing is enabled. Future changes will automatically be activated as you modify, add or delete items in this domain.
Domain Structure
iam_domain
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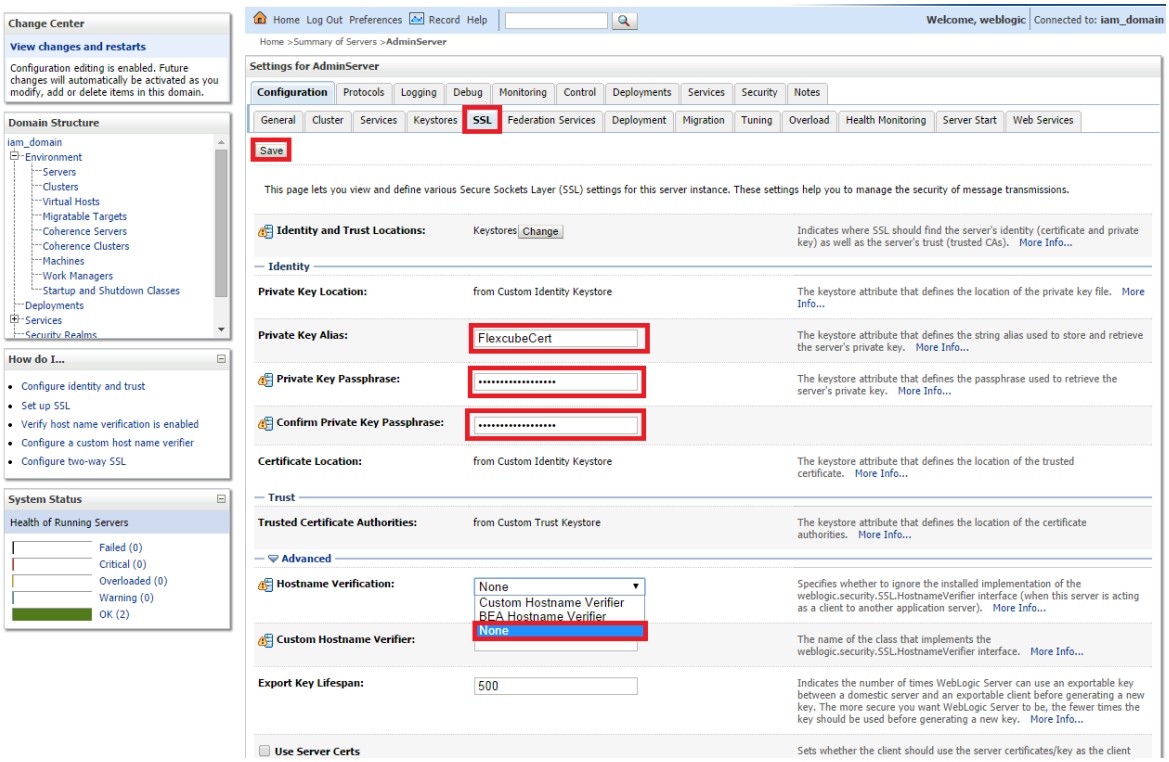
Servers
Clusters
Virtual Hosts
Migratable Targets
Coherence Servers
Coherence Clusters
Machines
Work Managers
Startup and Shutdown Classes
Deployments
Services
How do I...
Configure identity and trust
Configure keystores
Set up SSL
System Status
Health of Running Servers
Failed (0)
Critical (0)
Overloaded (0)
Warning (0)
OK (3)
Home Log Out Preferences Record Help
Welcome, weblogic Connected to: iam_domain
Home >Summary of Servers >AdminServer
Settings for AdminServer
Configuration Protocols Logging Debug Monitoring Control Deployments Services Security Notes
General Cluster Services Keystores SSL Federation Services Deployment Migration Tuning Overload Health Monitoring Server Start Web Services
Save
Keystores ensure the secure storage and management of private keys and trusted certificate authorities (CAs). This page lets you view and define various keystore configurations. These settings help you to manage the security of message transmissions.
Keystores:
Custom Identity and Custom Trust
Change
Which configuration rules should be used for finding the server's identity and trust keystores? More Info...
Identity
Custom Identity Keystore:
nFlexcubeKeyStore.jks
/scratch/app/fmw115/oam1115/BaseKeyStore/AdminFlexcubeKeyStore.jks
Custom Identity Keystore Type:
jks
The type of the keystore. Generally, this is JKS. More Info...
Custom Identity Keystore Passphrase:
The encrypted custom identity keystore's passphrase. If empty or null, then the keystore will be opened without a passphrase. More Info...
Confirm Custom Identity Keystore Passphrase:
Trust
Custom Trust Keystore:
nFlexcubeKeyStore.jks
/scratch/app/fmw115/oam1115/BaseKeyStore/AdminFlexcubeKeyStore.jks
Custom Trust Keystore Type:
jks
The type of the keystore. Generally, this is JKS. More Info...
Custom Trust Keystore Passphrase:
The custom trust keystore's passphrase. If empty or null, then the keystore will be opened without a passphrase. More Info...
Confirm Custom Trust Keystore Passphrase:
Save

2.5.2.5 Follow the steps in SSL Tab as shown below:

1. Enter Private Key Alias as same as the alias name entered in step 3.2.1.1.
2. Enter Private Key Passphrase and Confirm Private Key Passphrase as same as the Private Key Password entered in step 3.2.1.1.
3. Change the Hostname Verification to None.
4. Click on Save.


Change Center
View changes and restarts
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Migratable Targets
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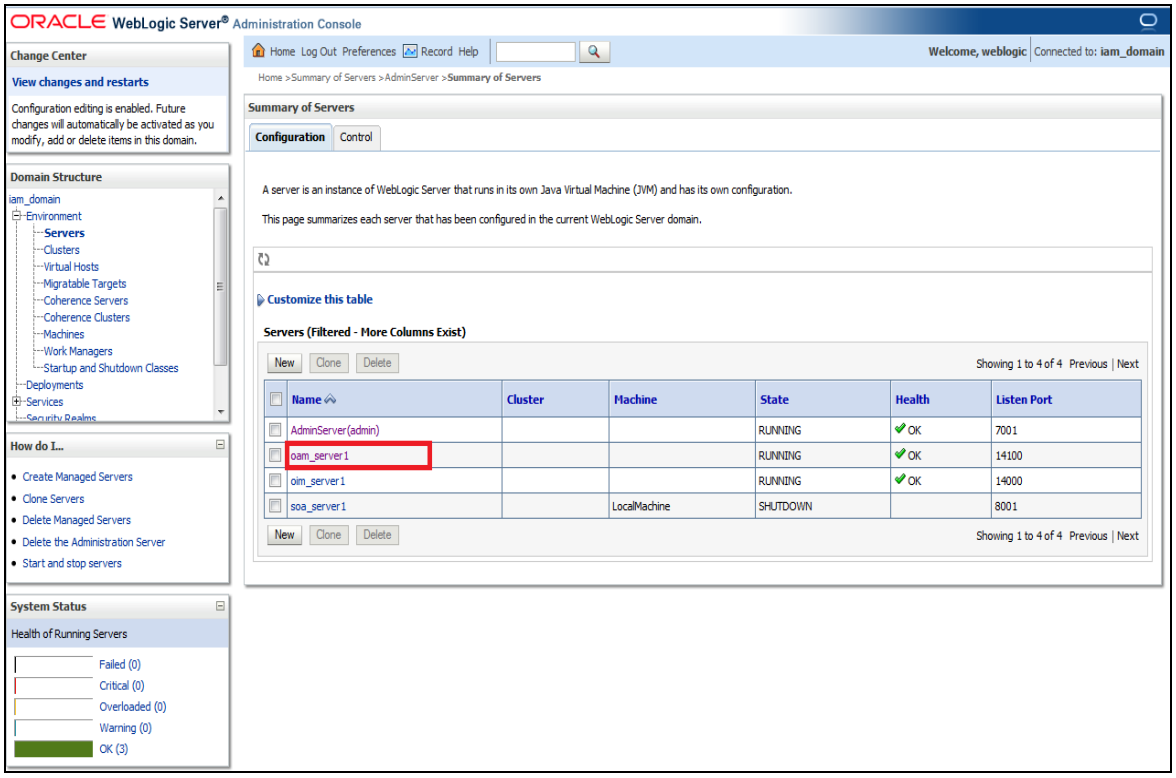
Coherence Clusters
Machines
Work Managers
Startup and Shutdown Classes
Deployments
Services
Security Realms
How do I...
Configure identity and trust
Set up SSL
Verify host name verification is enabled
Configure a custom host name verifier
Configure two-way SSL
System Status
Health of Running Servers
Failed (0)
Critical (0)
Overloaded (0)
Warning (0)
OK (2)
Home Log Out Preferences Record Help
Welcome, weblogic Connected to: iam_domain
Home >Summary of Servers >AdminServer
Settings for AdminServer
Configuration Protocols Logging Debug Monitoring Control Deployments Services Security Notes
General Cluster Services Keystores SSL Federation Services Deployment Migration Tuning Overload Health Monitoring Server Start Web Services
Save
This page lets you view and define various Secure Sockets Layer (SSL) settings for this server instance. These settings help you to manage the security of message transmissions.
Identity and Trust Locations:
Keystores Change
Indicates where SSL should find the server's identity (certificate and private key) as well as the server's trust (trusted CAs). More Info...
Identity
Private Key Location:
from Custom Identity Keystore
The keystore attribute that defines the location of the private key file. More Info...
Private Key Alias:
FlexcubeCert
The keystore attribute that defines the string alias used to store and retrieve the server's private key. More Info...
Private Key Passphrase:
Confirm Private Key Passphrase:
Certificate Location:
from Custom Identity Keystore
The keystore attribute that defines the location of the trusted certificate. More Info...
Trust
Trusted Certificate Authorities:
from Custom Trust Keystore
The keystore attribute that defines the location of the certificate authorities. More Info...
Advanced
Hostname Verification:
None
Custom Hostname Verifier
BEA Hostname Verifier
None
Specifies whether to ignore the installed implementation of the weblogic.security.SSL.HostnameVerifier interface (when this server is acting as a client to another application server). More Info...
Custom Hostname Verifier:
The name of the class that implements the weblogic.security.SSL.HostnameVerifier interface. More Info...
Export Key Lifespan:
500
Indicates the number of times WebLogic Server can use an exportable key between a domestic server and an exportable client before generating a new key. The more secure you want WebLogic Server to be, the fewer times the key should be used before generating a new key. More Info...
Use Server Certs
Sets whether the client should use the server certificates/key as the client

5. Select OAM Server to enable SSL options and Repeat the steps performed in 2.2.2.2 to 2.2.2.5

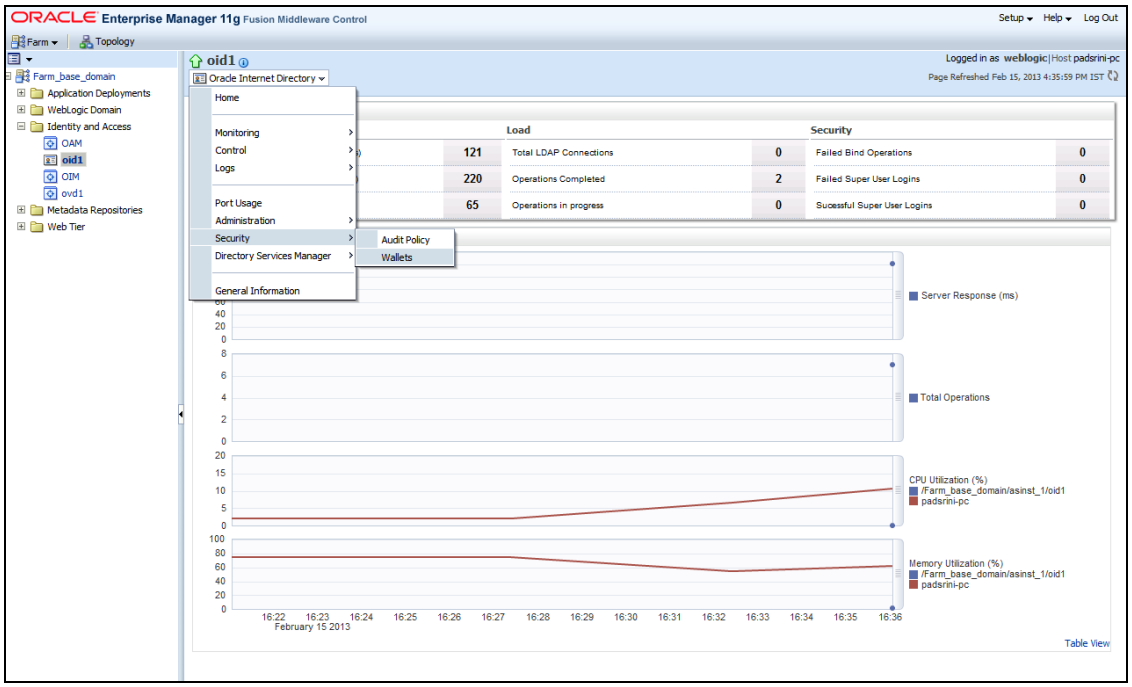


6. Now the admin server and OAM servers are SSL enabled. Restart both the servers.

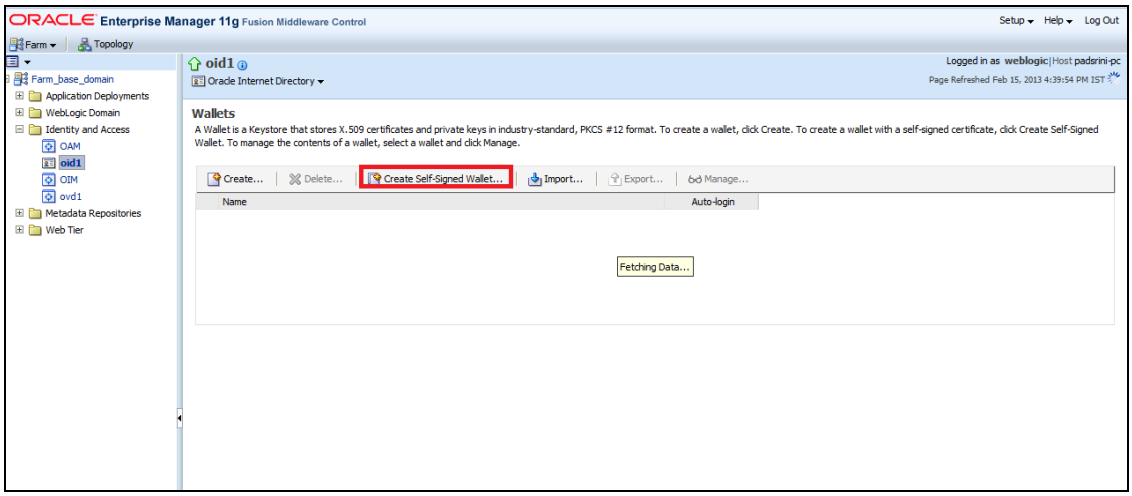
2.5.3 Configuring SSL Mode in Oracle Internet Directory

To enable SSL for OID LDAP Server refer, follow the below steps.

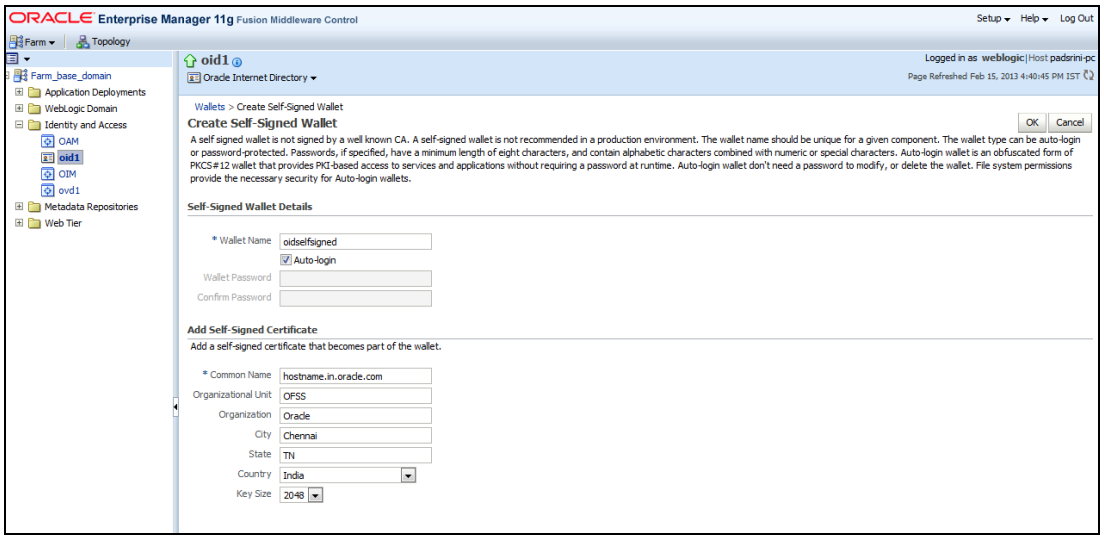
1. Login to the Enterprise Manager Console of the domain, in which Oracle Internet Directory is associated.

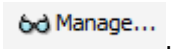


2. Click ‘Create Self-Signed Wallet’.

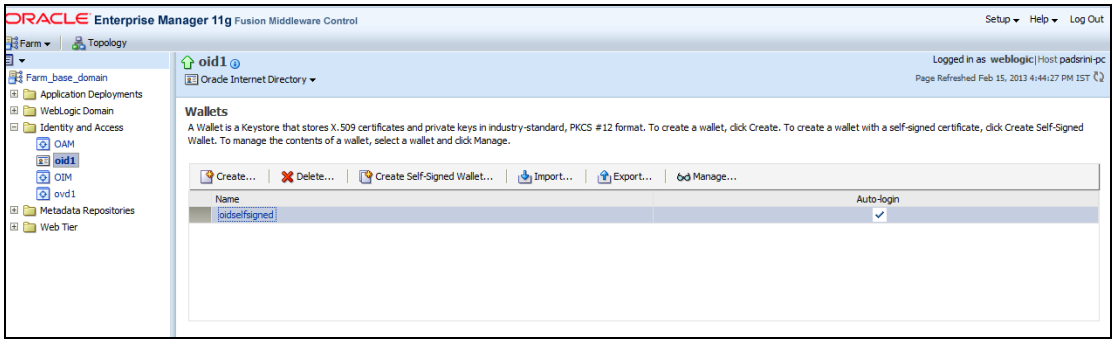


3. Enter the Details as below and Click ‘OK’.

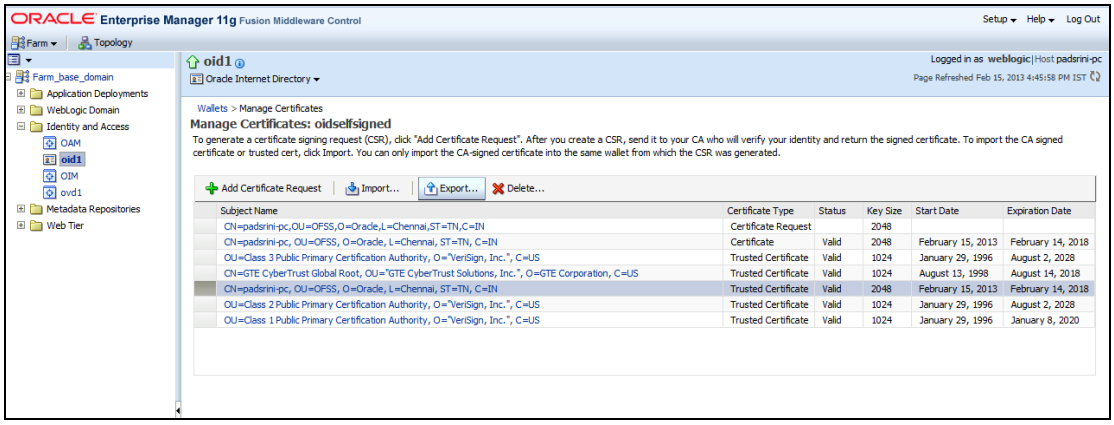

ORACLE Enterprise Manager 11g Fusion Middleware Control
Setup
Help
Log Out
Farm
Topology
Farm_base_domain
Application Deployments
WebLogic Domain
Identity and Access
OAM
oid1
OIM
ovd1
Metadata Repositories
Web Tier
oid1
Oracle Internet Directory
Logged in as weblogic | Host padsrini-pc
Page Refreshed Feb 15, 2013 4:40:45 PM IST
Wallets > Create Self-Signed Wallet
Create Self-Signed Wallet
OK
Cancel
A self signed wallet is not signed by a well known CA. A self-signed wallet is not recommended in a production environment. The wallet name should be unique for a given component. The wallet type can be auto-login or password-protected. Passwords, if specified, have a minimum length of eight characters, and contain alphabetic characters combined with numeric or special characters. Auto-login wallet is an obfuscated form of PKCS#12 wallet that provides PKI-based access to services and applications without requiring a password at runtime. Auto-login wallet don't need a password to modify, or delete the wallet. File system permissions provide the necessary security for Auto-login wallets.
Self-Signed Wallet Details
* Wallet Name
oidselfsigned
Auto-login
Wallet Password
Confirm Password
Add Self-Signed Certificate
Add a self-signed certificate that becomes part of the wallet.
* Common Name
hostname.in.oracle.com
Organizational Unit
OFSS
Organization
Oracle
City
Chennai
State
TN
Country
India
Key Size
2048

4. Click 

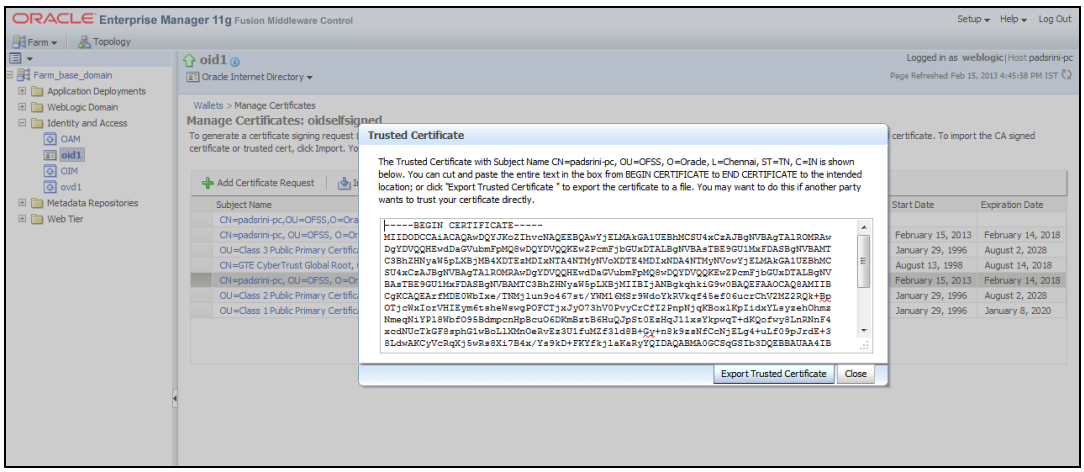
.



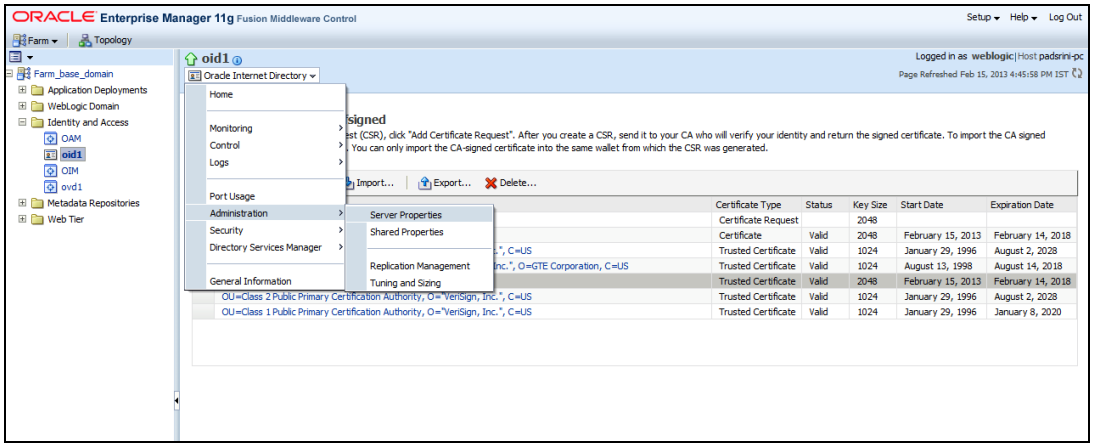
5. Select the Trusted Certificate and Click ‘Export’.



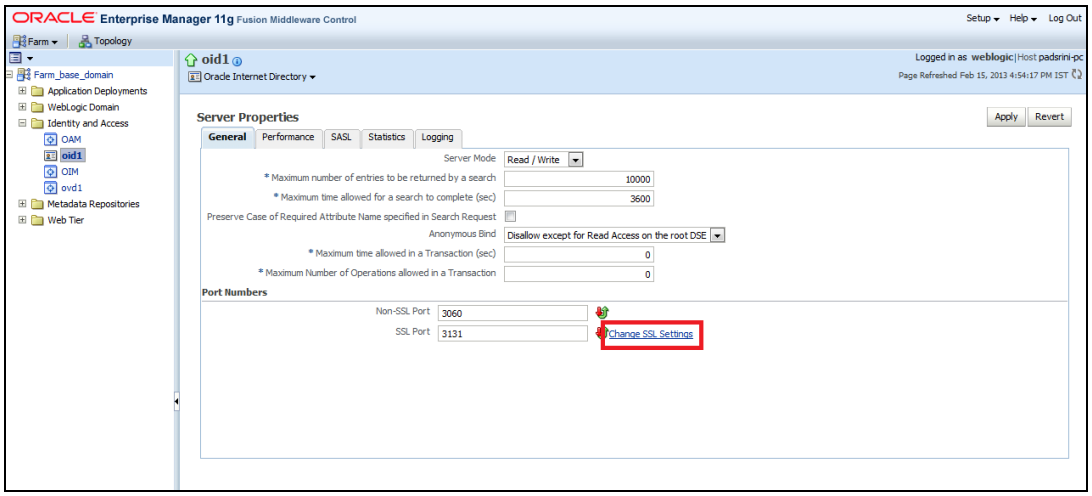
6. Click ‘Export Trusted Certificate’ and save the certificate file.



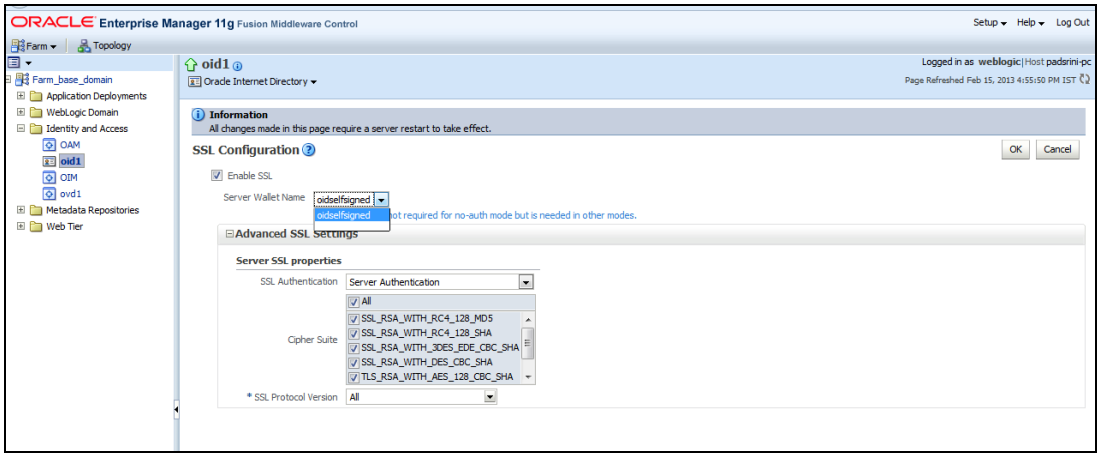
7. Click ‘Server Properties’.



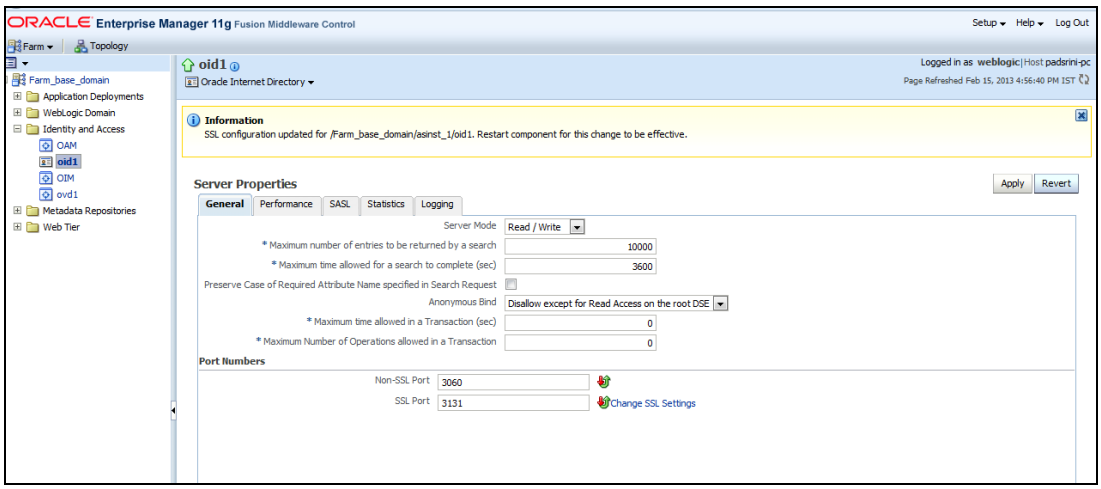
8. Click ‘Change SSL Settings’.



9. Select the Wallet, SSL Authentication as Server Authentication, Cipher Suite, SSL Protocal Version as below and click ‘OK’.



10. Click ‘Apply’.



2.5.3.1 Import LDAP Server SSL Certificate into OAM Server

We have to import the LDAP – Server certificatefile into OAM server’s JAVA_HOME/jre/lib/security/cacerts. Default Password is “**changeit**”.

For eg:

keytool -import -v -trustcacerts -alias ldapcacert –file ldap_server_certificate.cer -keystore JAVA_HOME/jre/lib/security/cacerts -storepass changeit

Restart Both OID & OAM Server.

2.6 Configuring SSO in OAM Console

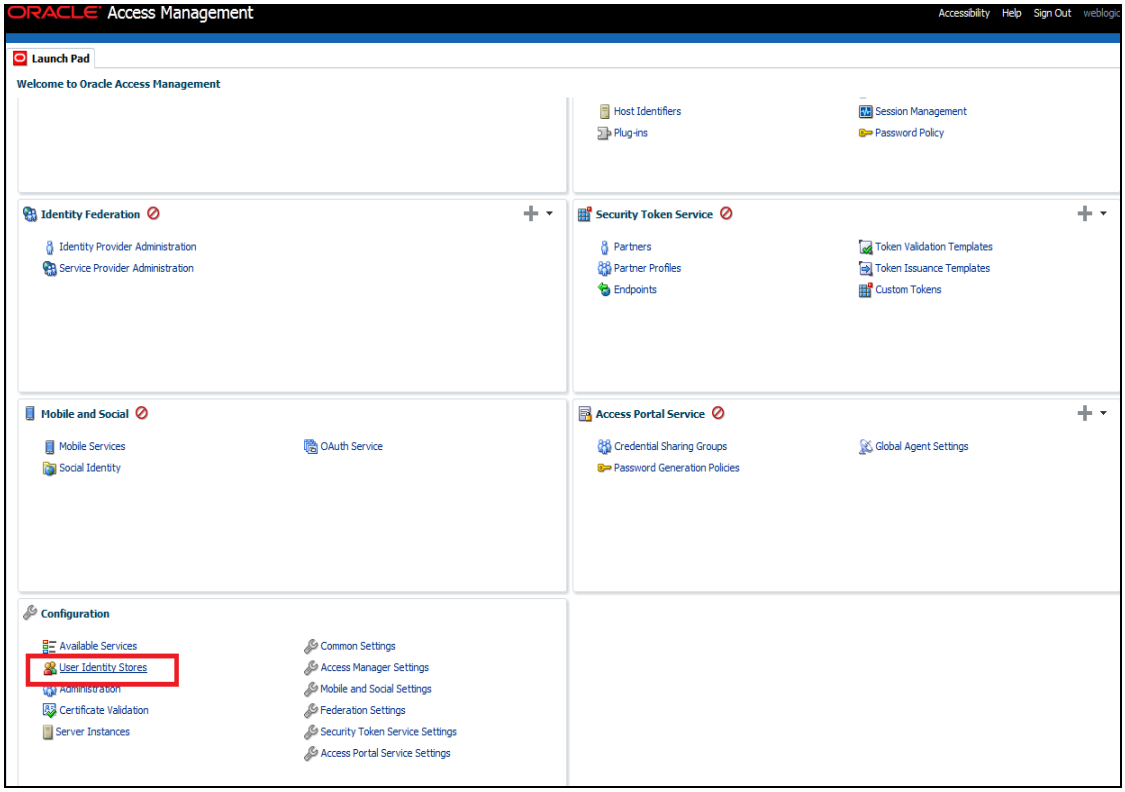
After installing OAM, Webtier Utilities and Webgate, extend the Weblogic domain to create OAM server.

Follow the post installation scripts deployWebGate and EditHttpConf as provided in (http://docs.oracle.com/cd/E37115_01/install.1112/e38922/webgate_ohs.htm#CACDEJAD)

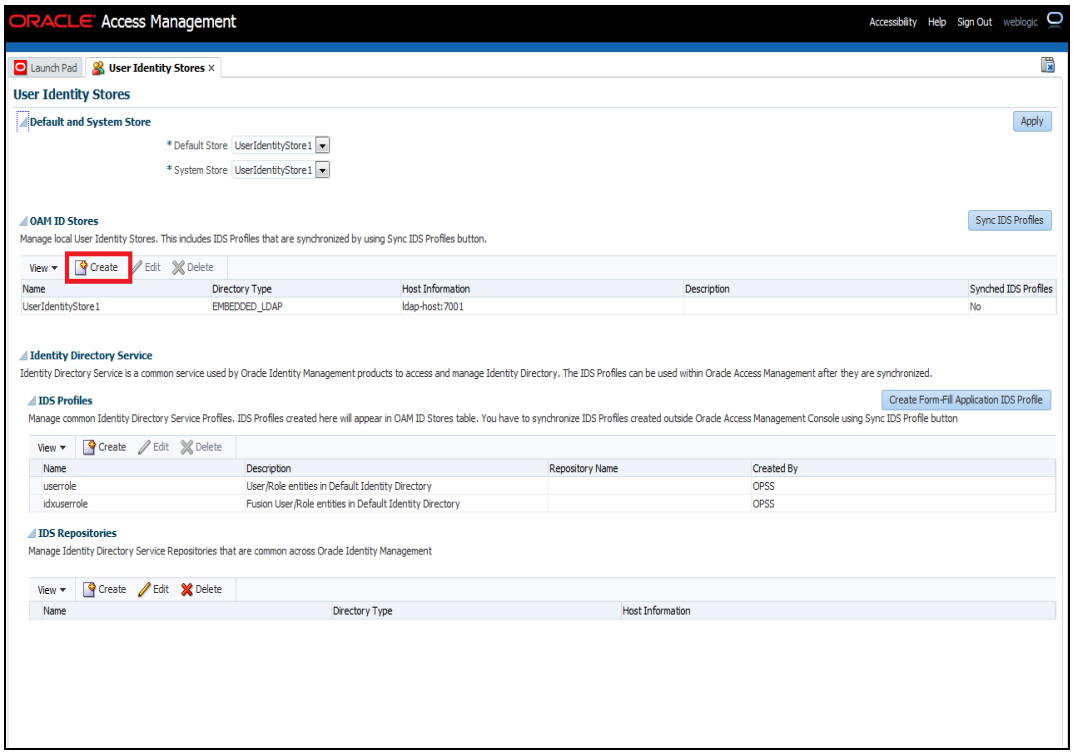
Refer the Oracle Support Document ID: 1678062.1 , before configuring Webgate against Oracle HTTP Server.

2.6.1 Identity Store Creation

1. To create new User Identity Store, Login to OAM Console and Click ‘User Identity Store’ under Configuration.

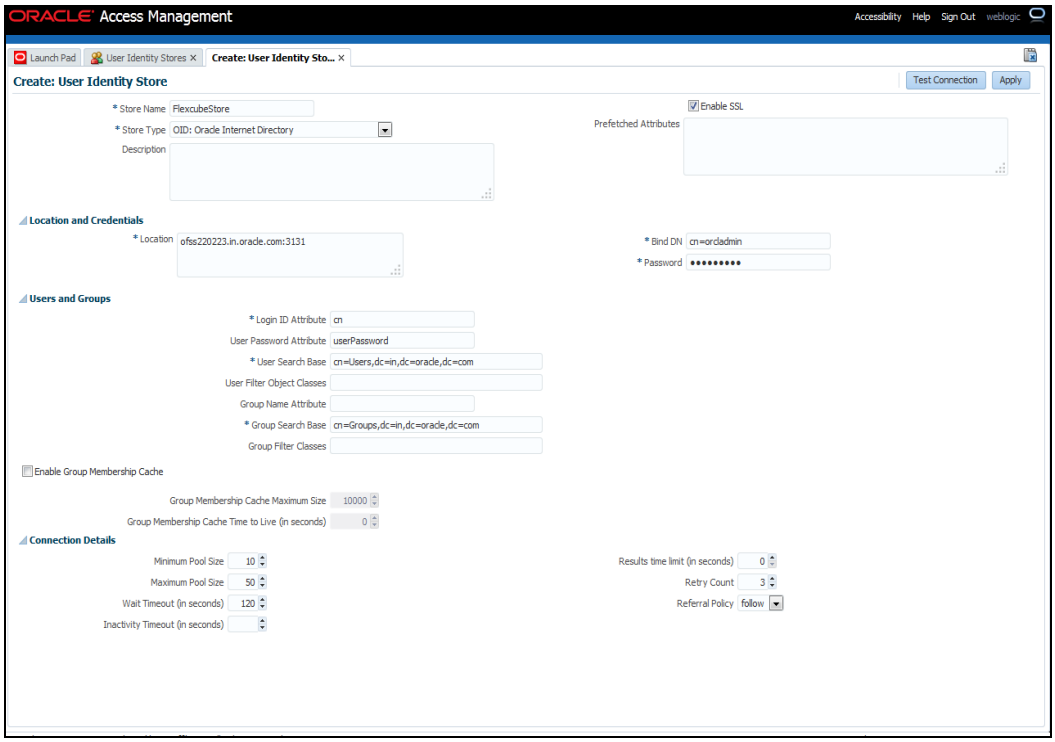


2. Click ‘Create’ under OAM ID Stores.

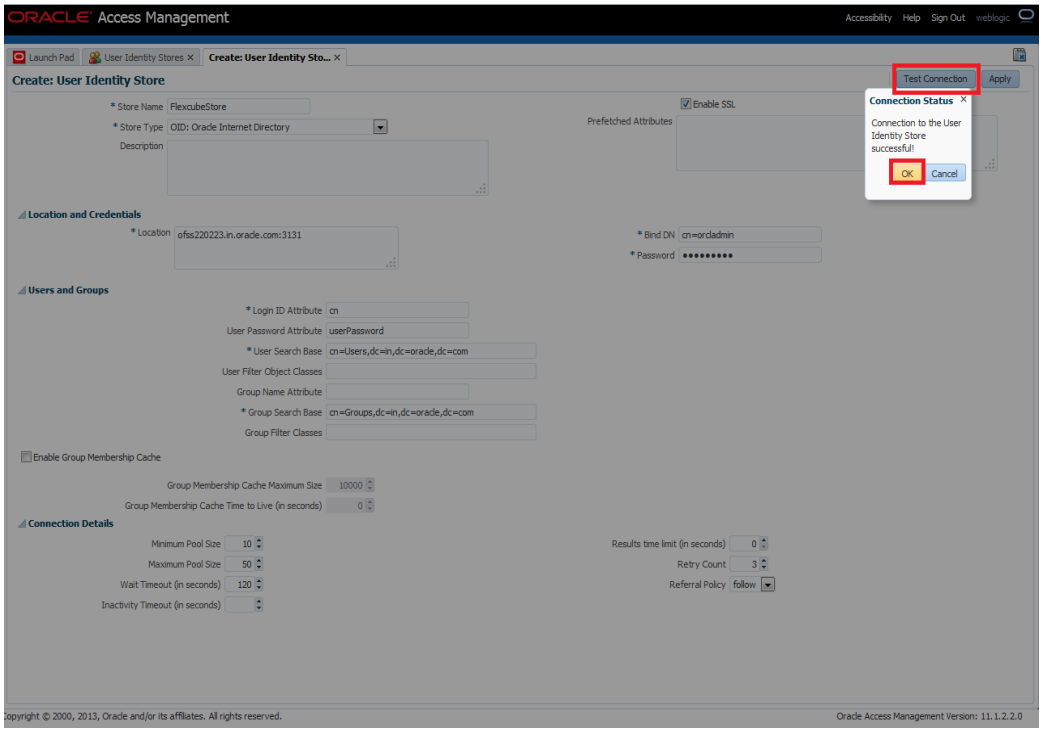

ORACLE Access Management
Accessibility Help Sign Out weblogic
Launch Pad
User Identity Stores
User Identity Stores
Default and System Store
Apply
* Default Store UserIdentityStore1
* System Store UserIdentityStore1
OAM ID Stores
Sync IDS Profiles
Manage local User Identity Stores. This includes IDS Profiles that are synchronized by using Sync IDS Profiles button.
View Create Edit Delete
Name Directory Type Host Information Description Synched IDS Profiles
UserIdentityStore1 EMBEDDED_LDAP ldap-host:7001 No
Identity Directory Service
Identity Directory Service is a common service used by Oracle Identity Management products to access and manage Identity Directory. The IDS Profiles can be used within Oracle Access Management after they are synchronized.
IDS Profiles
Create Form-Fill Application IDS Profile
Manage common Identity Directory Service Profiles. IDS Profiles created here will appear in OAM ID Stores table. You have to synchronize IDS Profiles created outside Oracle Access Management Console using Sync IDS Profile button
View Create Edit Delete
Name Description Repository Name Created By
userrole User/Role entities in Default Identity Directory OPSS
idxuserrole Fusion User/Role entities in Default Identity Directory OPSS
IDS Repositories
Manage Identity Directory Service Repositories that are common across Oracle Identity Management
View Create Edit Delete
Name Directory Type Host Information

3. Enter the below details in the Create User Identity Store Form

   - Choose Store Type as OID: Oracle Internet Directory.
   - Location: LDAP server Host name and Port Number in <HOSTNAME>:SSL PORT format
   - Select Enable SSL check box
   - Bind DN: Admin User name to connect the LDAP Server
   - Password: Admin Password to connect the LDAP Server
   - Login ID Attribute: Specify the LDAP attribute from which the login ID specifying the User will be extracted.
   - User Search Base: Full DN for the node at which enterprise users are stored in the directory; for example, cn=Users,realm_DN.
   - Group Search Base: Currently only static groups are supported, with the uniquemember attribute. The node in the directory information tree (DIT) under which group data is stored, and the highest possible base for all group data searches.

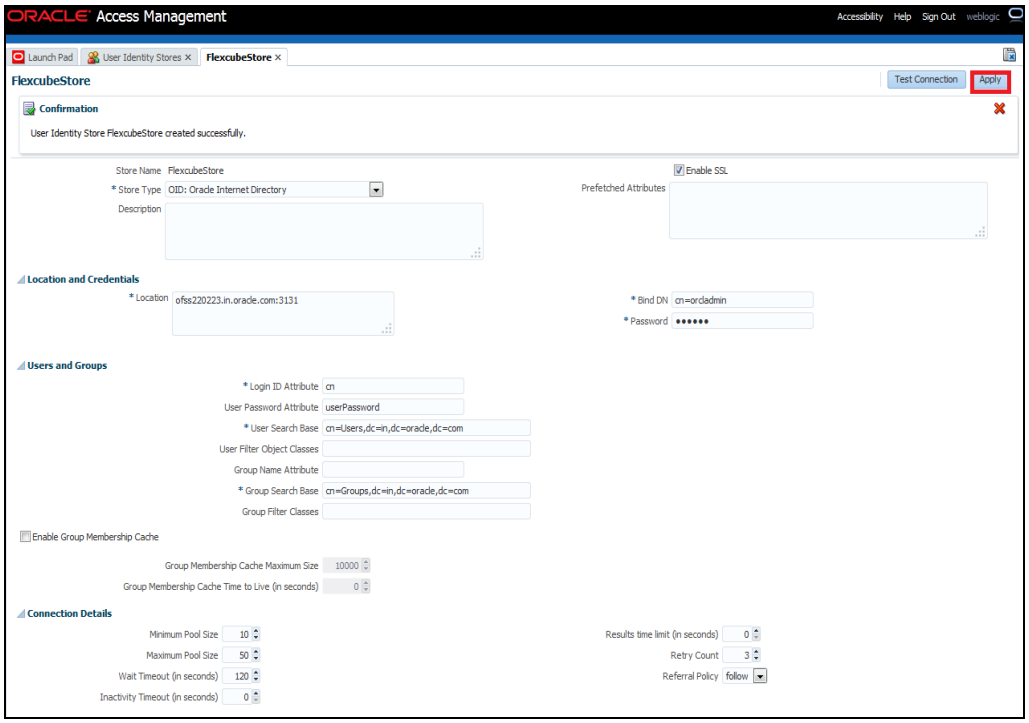


4. Click ‘Test Connection’ to validate the Credentials Passed.



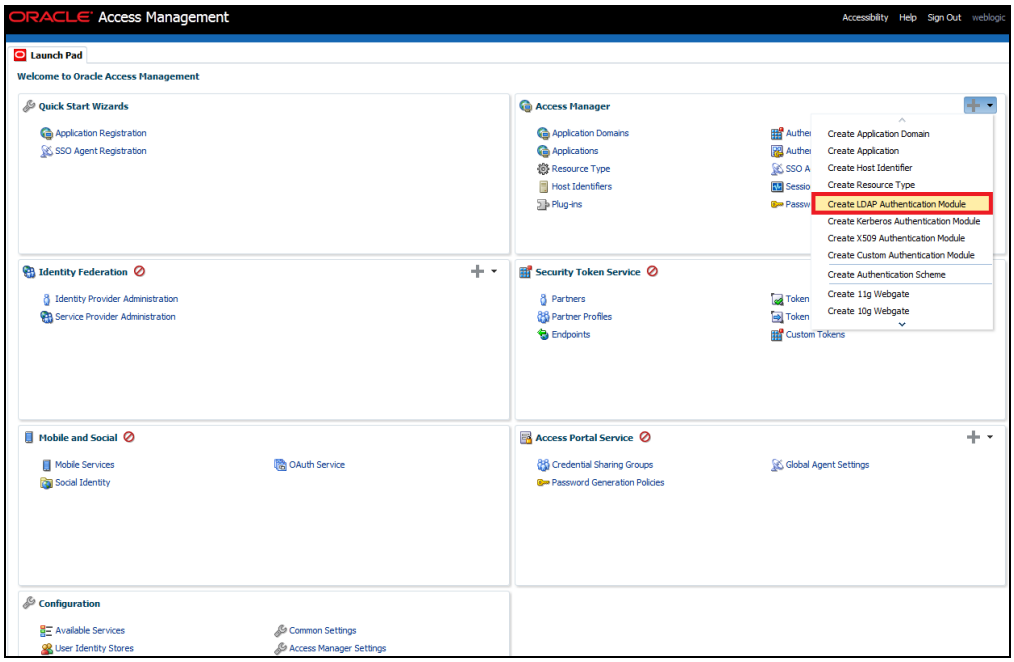
5. Click ‘Apply’ to Create the User Identity Store.

Note: User Identity Store will be created only if valid LDAP Parameters are passed.



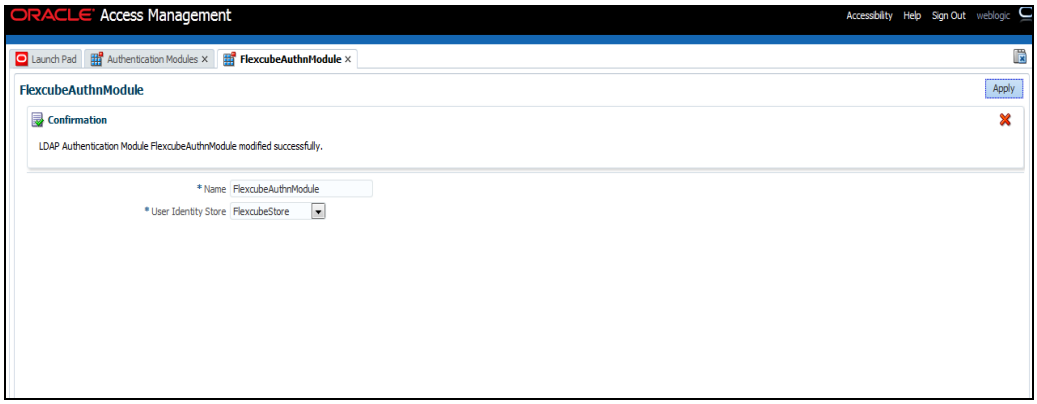
2.6.2 Creating Authentication Module

1. Click on in Access Manager to Create LDAP Authentication Modules .



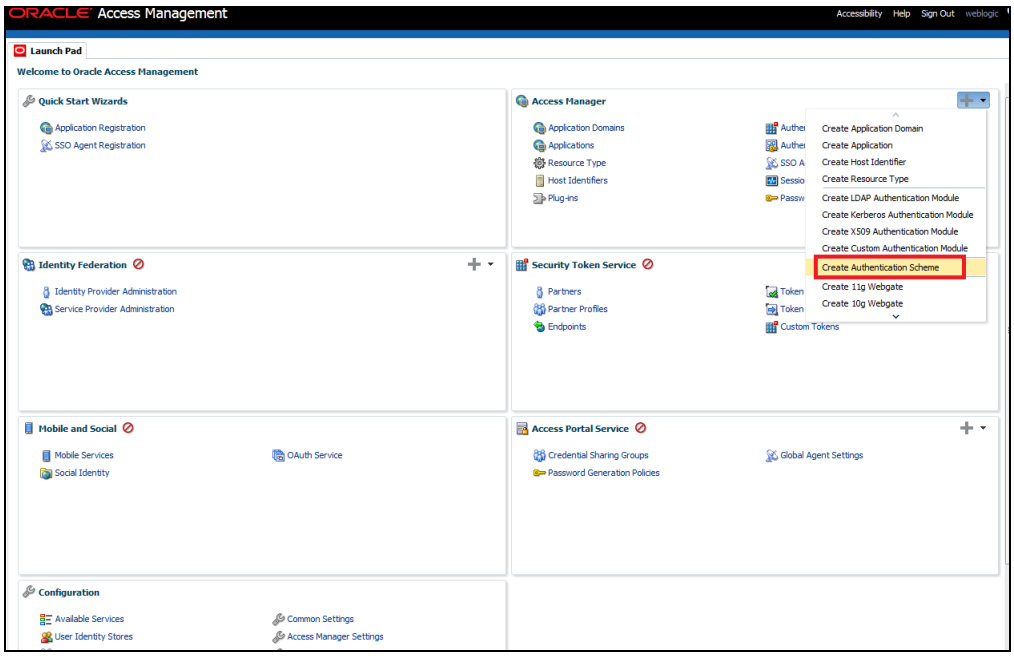
2. Click ‘Apply’ to create Authentication Module.
3. Choose the User Identity Created.

Refer the section ‘Identity Store Location’ of this document.



2.6.3 Creating Authentication Scheme

1. Click ‘Create Authentication Scheme’ under Access Manager .



Select any of the challenge method for creating an authentication Scheme as explained below and refer to OAM documentation for more details on the same.

http://docs.oracle.com/cd/E27559_01/admin.1112/e27239/shared.htm#BABFCIHA

2.6.3.1.1 Basic Style Authentication Scheme

Enter the below details and click ‘Apply’:

Name : Name of the Authentication Scheme

Authentication Level : 1

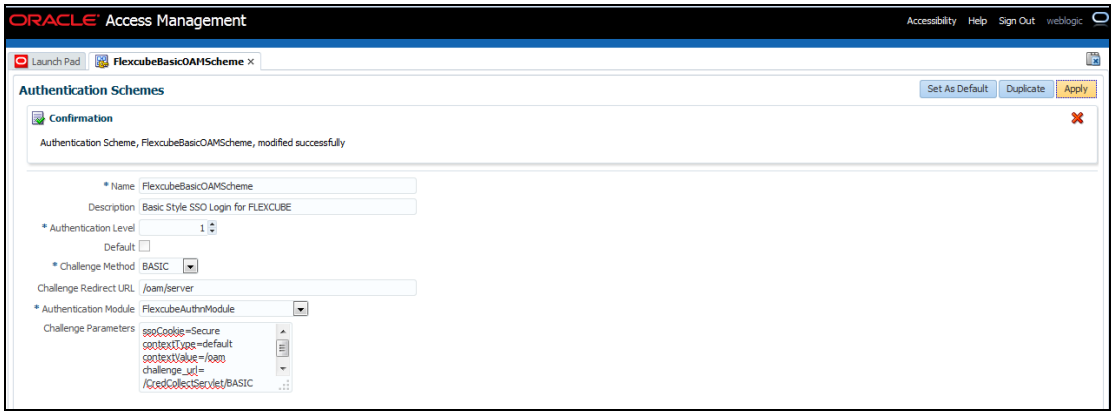
Challenge Method : BASIC

Challenge Redirect URL : /oam/server

Authentication Module : Authentication Module

Refer the section ‘Creating Authentication Module’ of this document.

Challenge Parameters : ssoCookie=Secure
contextType=default
contextValue=/oam
challenge_url=/CredCollectServlet/BASIC



We need to add the 'enforce-valid-basic-auth-credentials' tag to the config.xml file ,located under <weblogic deployment path>/user_projects/domains/<MyDomain>/config/.

The tag must be inserted within the <security-configuration> tag as follows: [Just above </security-configuration> tag]
<enforce-valid-basic-auth-credentials>false</enforce-valid-basic-auth-credentials>

2.6.3.2 Form Style Authentication Scheme

Enter the below details and click ‘Apply’:

Name : Name of the Authentication Scheme

Authentication Level : 2

Challenge Method : FORM

Challenge Redirect URL : /oam/server

Authentication Module : Authentication Module

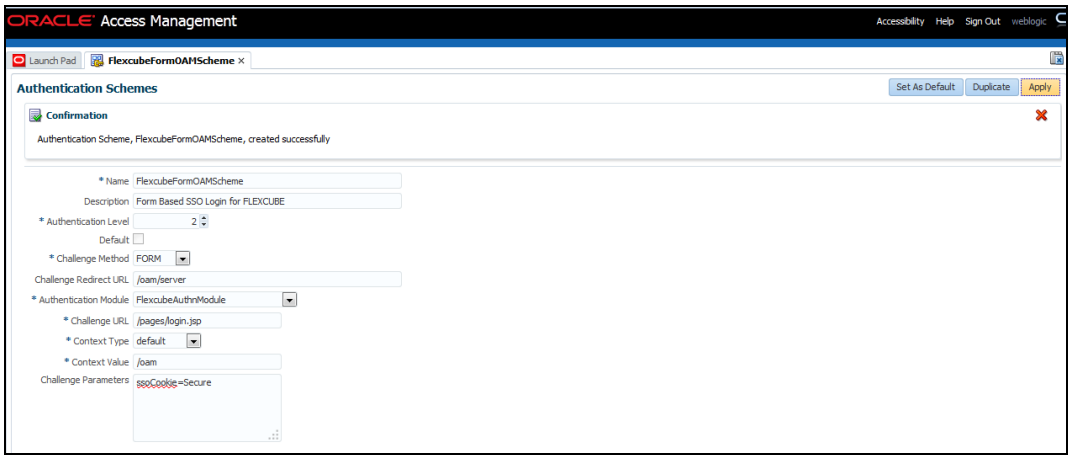
Refer the section ‘Creating Authentication Module’ of this document.

Challenge URL : /pages/login.jsp

Context Type : default

Context Value : /oam

Challenge Parameters : ssoCookie=Secure



2.6.3.3 KBA Based Strong Authentication Scheme (Only in case OAAM is used)

Enter the Below Details and click 'Apply':

Name : Name of the Authentication Scheme

Authentication Level : 2

Challenge Method : FORM

Challenge Redirect URL : /oam/server

Authentication Module : Authentication Module

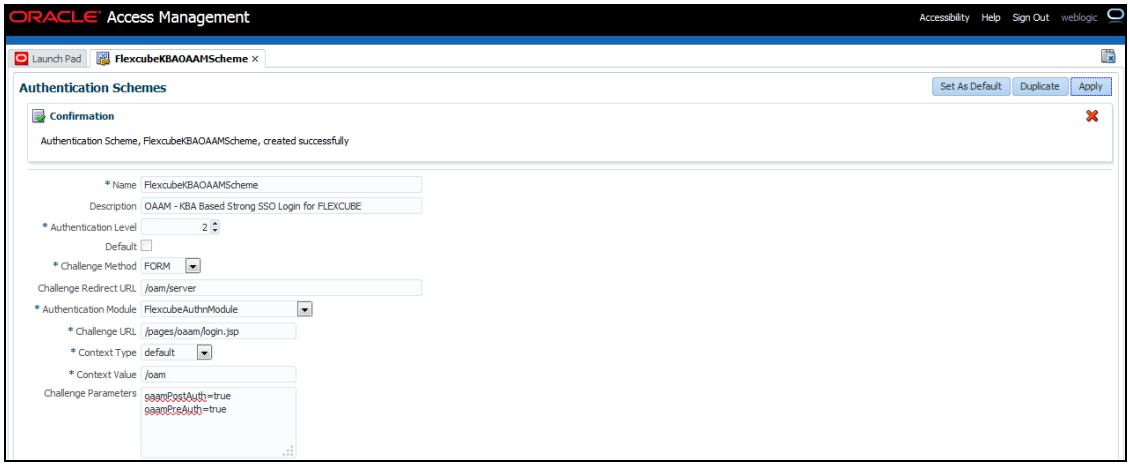
Refer the section 'Creating Authentication Module' of this document.

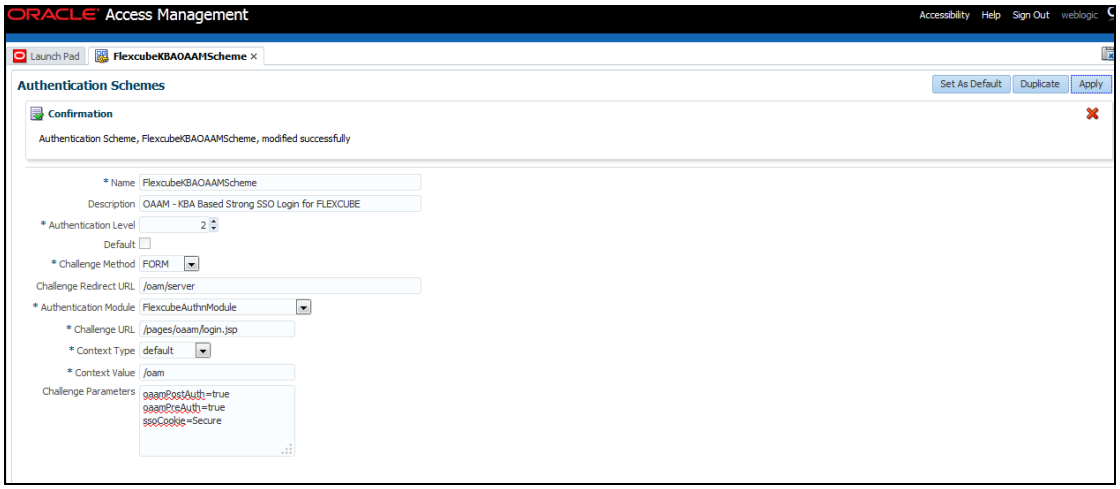
Challenge URL : /pages/oaam/login.jsp

Context Type : default

Context Value : /oam

Challenge Parameters : ssoCookie=Secure
oaamPostAuth=true
oaamPreAuth=true

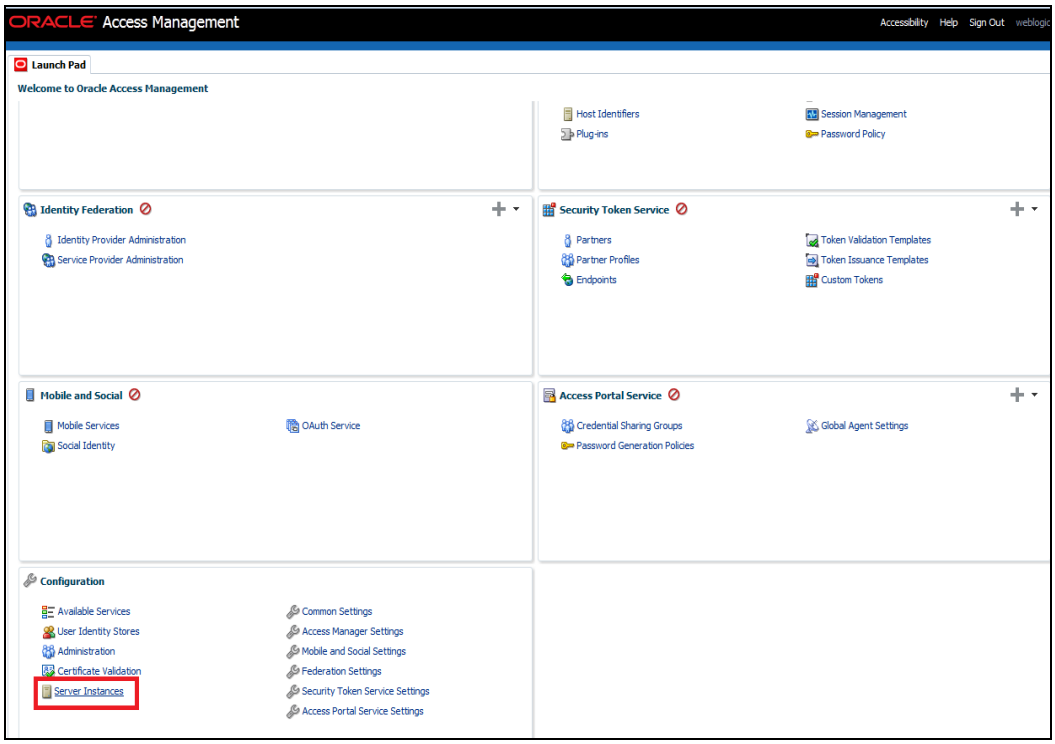




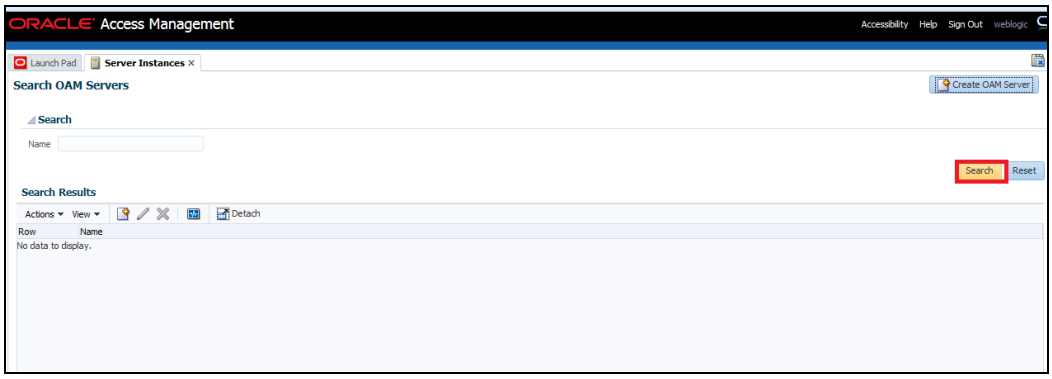
2.6.4 Creating OAM 11g Webgate

Follow the below steps to create a Webgate:

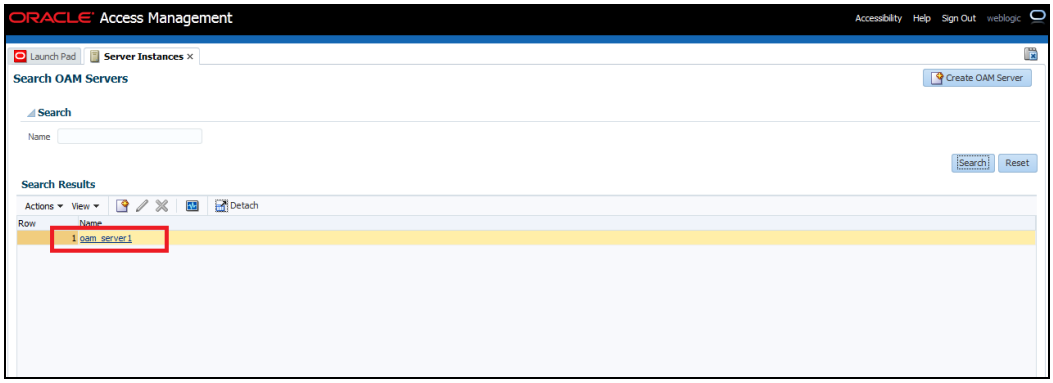
1. Click ‘Server Instances’ under Configuration.



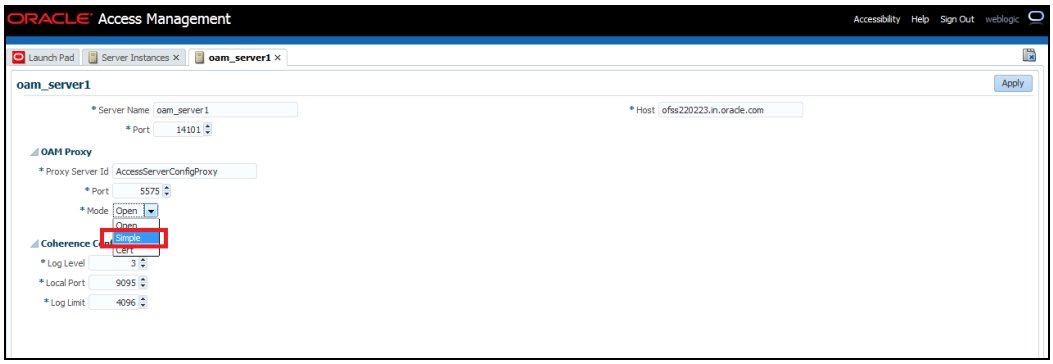
2. Click ‘Search’.

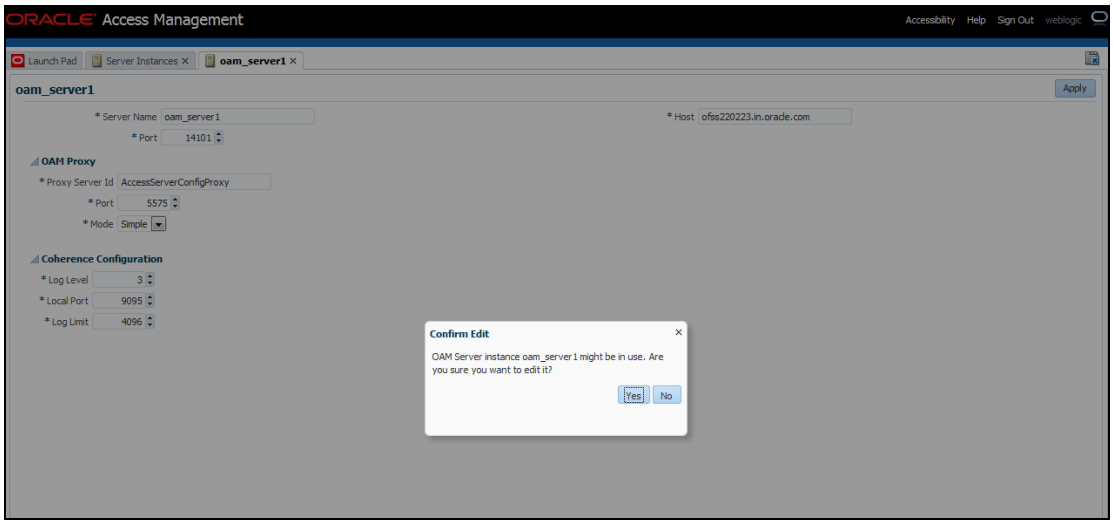


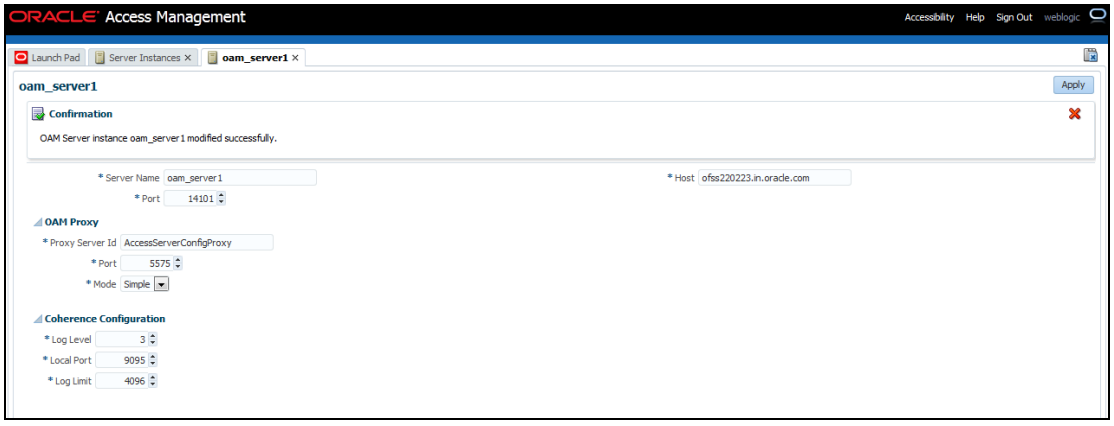
3. Edit oam_server1.



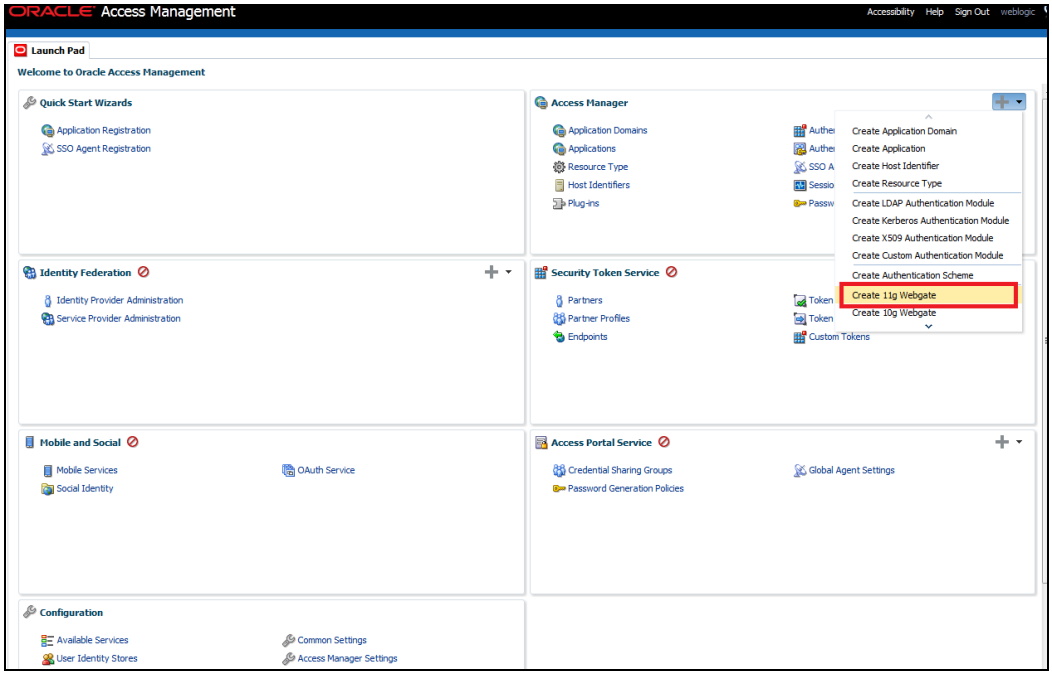
4. Modify the Mode from Open to Simple and click ‘Apply’.




ORACLE Access Management
Accessibility Help Sign Out weblogic
Launch Pad
Server Instances
oam_server1
oam_server1
Apply
* Server Name oam_server1
* Host ofss220223.in.oracle.com
* Port 14101
OAM Proxy
* Proxy Server Id AccessServerConfigProxy
* Port 5575
* Mode Simple
Coherence Configuration
* Log Level 3
* Local Port 9095
* Log Limit 4096
Confirm Edit
OAM Server instance oam_server1 might be in use. Are you sure you want to edit it?
Yes
No

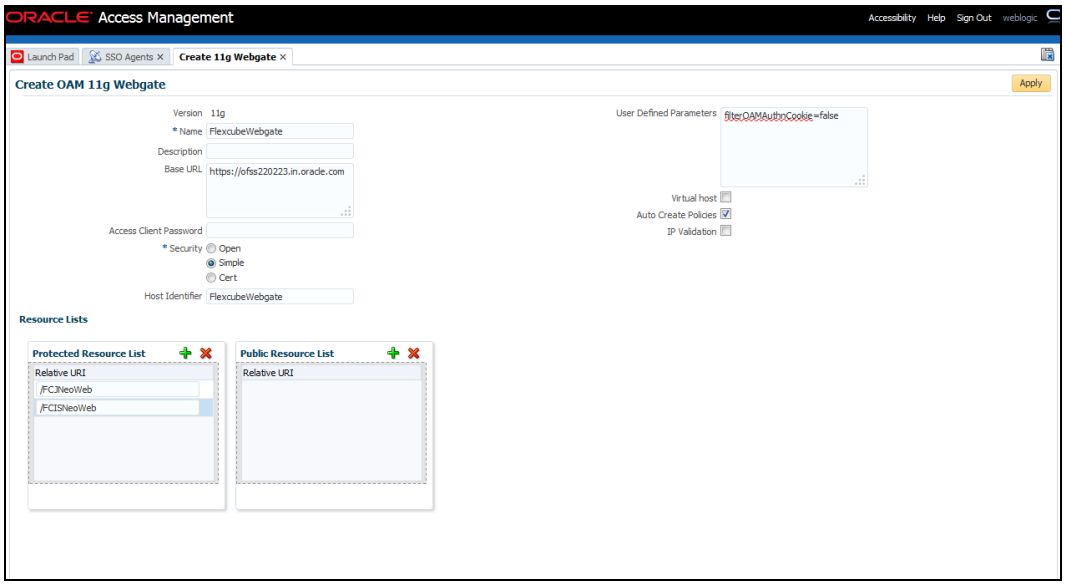

ORACLE Access Management
Accessibility Help Sign Out weblogic
Launch Pad
Server Instances
oam_server1
oam_server1
Apply
Confirmation
OAM Server instance oam_server1 modified successfully.
* Server Name oam_server1
* Host ofss220223.in.oracle.com
* Port 14101
OAM Proxy
* Proxy Server Id AccessServerConfigProxy
* Port 5575
* Mode Simple
Coherence Configuration
* Log Level 3
* Local Port 9095
* Log Limit 4096

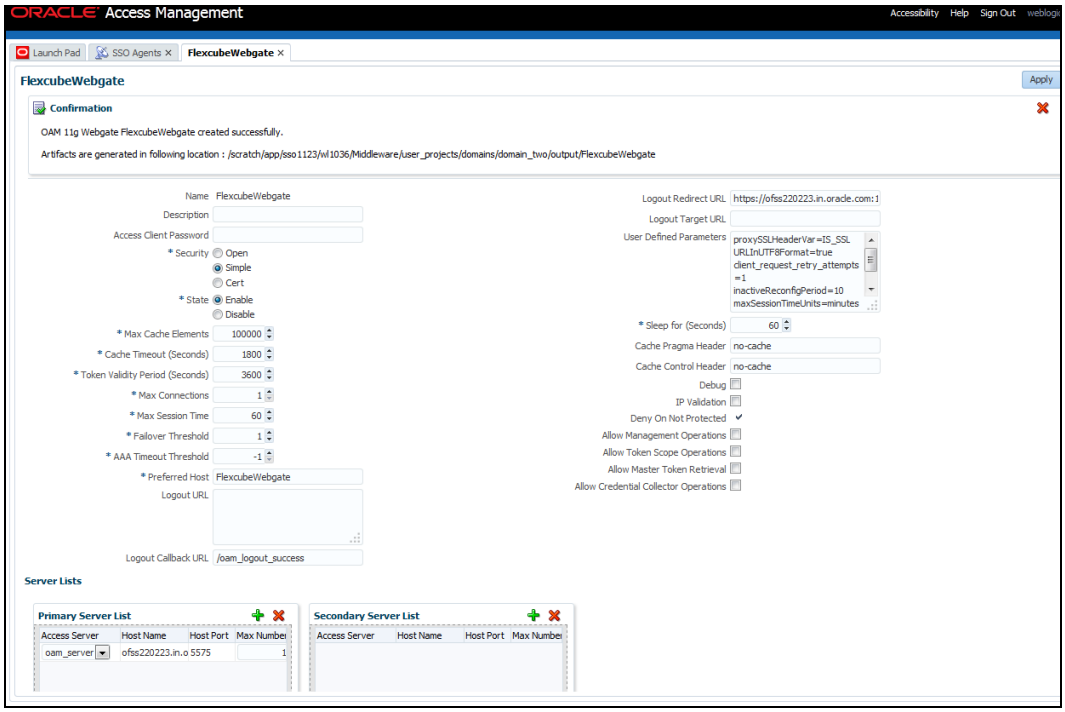
5. Click on Create 11g Webgate under Access Manager .



6. Enter the below and Click ‘Apply’:

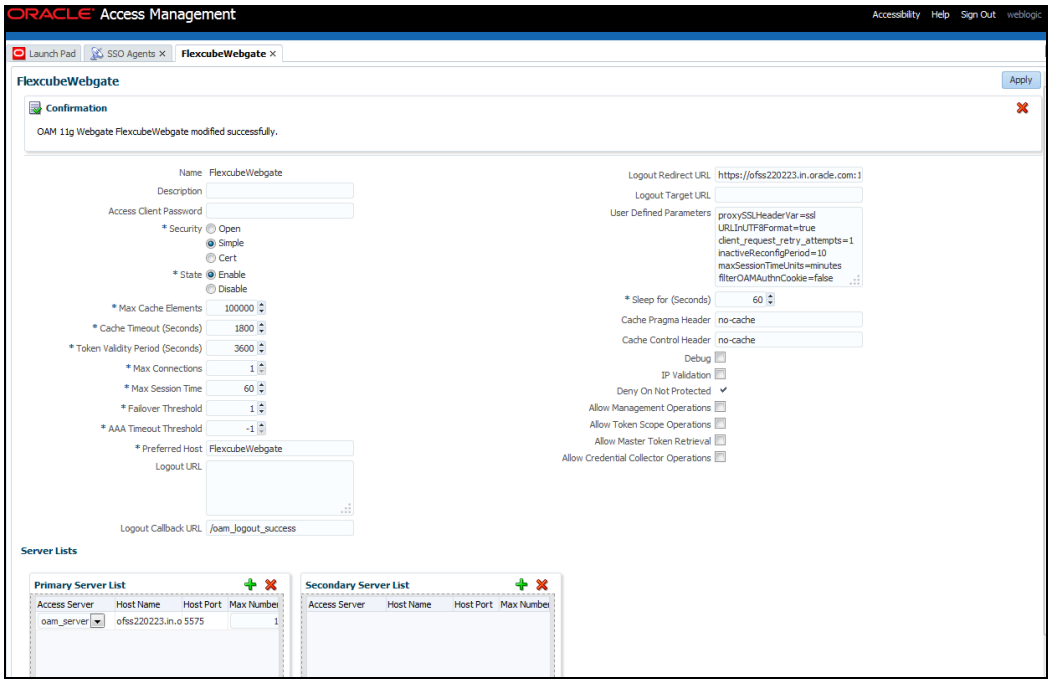
Name	: Custom Webgate Name
Base URL	: The host and port of the computer on which the Web server for the Webgate is installed. For example, http://example_host:port or https://example_host:port. The port number is optional.
Security	: Simple
Protected Resource List	: for FCUBS : /FCJNeoWeb For FCIS : /FCISNeoWeb
User Defined Parameters	: filterOAMAuthnCookie=false





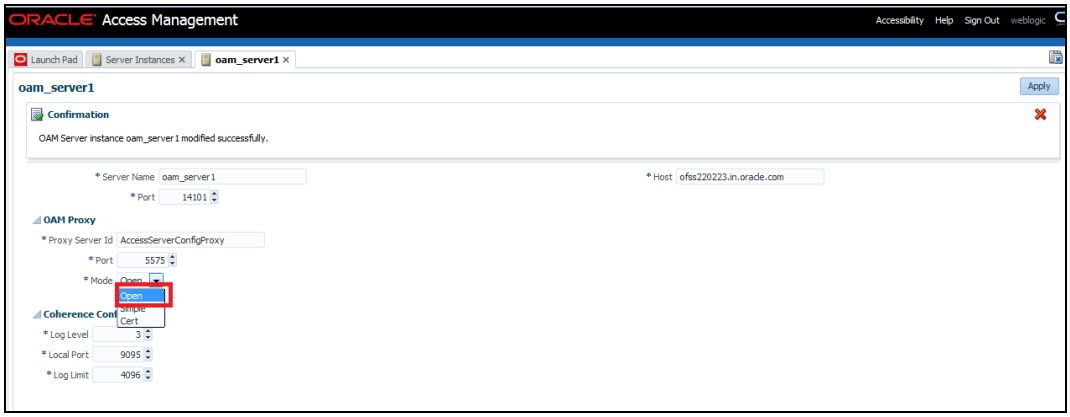
7. Once the OAM 11g Webgate is created, Change the parameter from **proxySSLHeaderVar=IS_SSL** to **proxySSLHeaderVar=ssl** along with other parameters in User Defined Parameters.

8. Click ‘Apply’.



9. Change the value of Mode back to Open in oam_server1 on Server Instance and click ‘Apply’.

Refer ‘Creating OAM 11g Webgate’ section of this document.

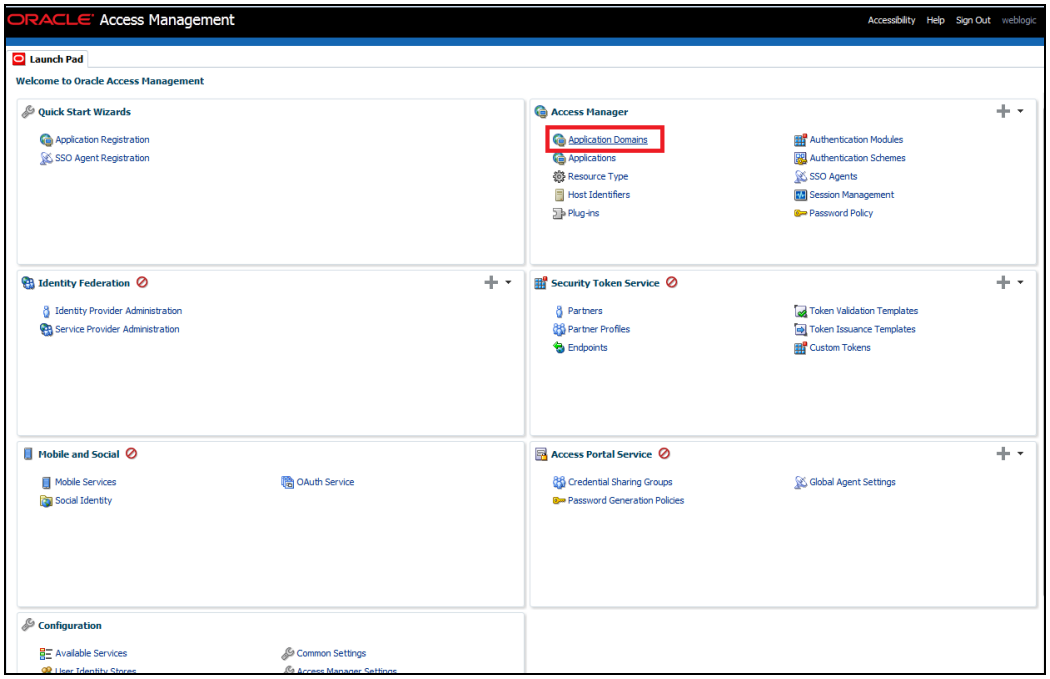


2.6.5 Post OAM Webgate 11g Creation

Follow the below steps to configure the webgate created .

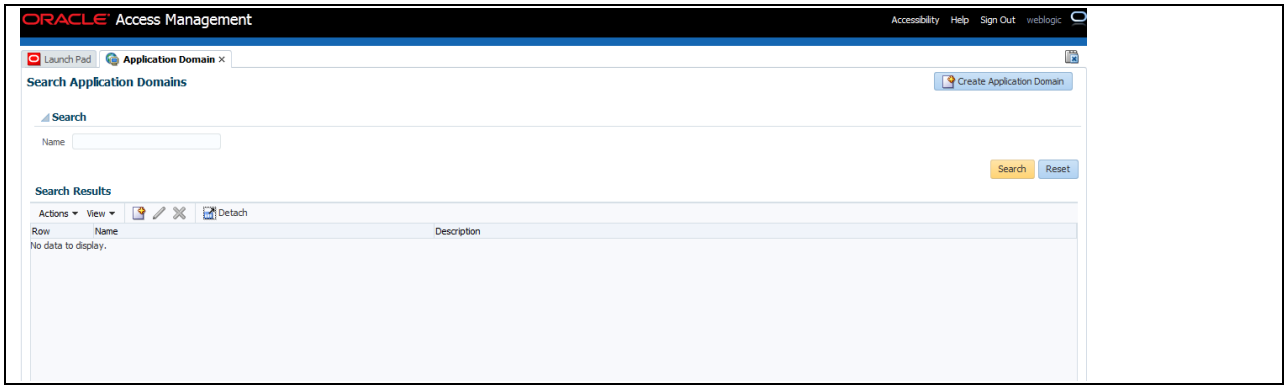
2.6.5.1 Application Domains Changes

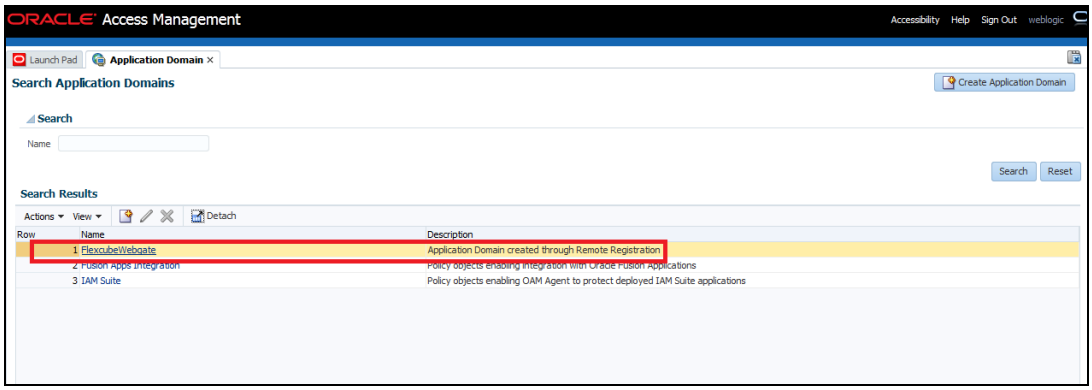
1. Click ‘Application Domains’ under Access Manager



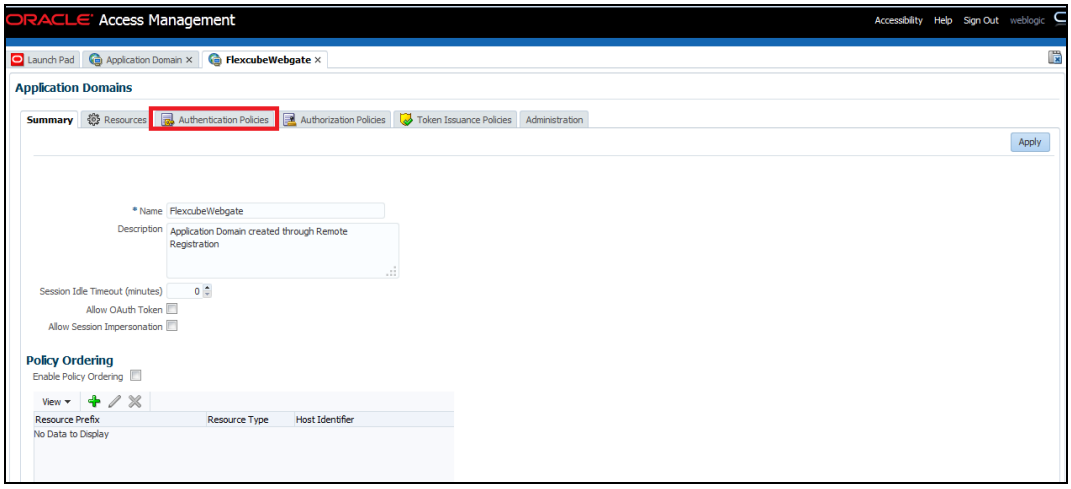
2. Click ‘Search’ to find the 11g Webgate.

Refer the section ‘Creating OAM 11g Creation’ of this document.

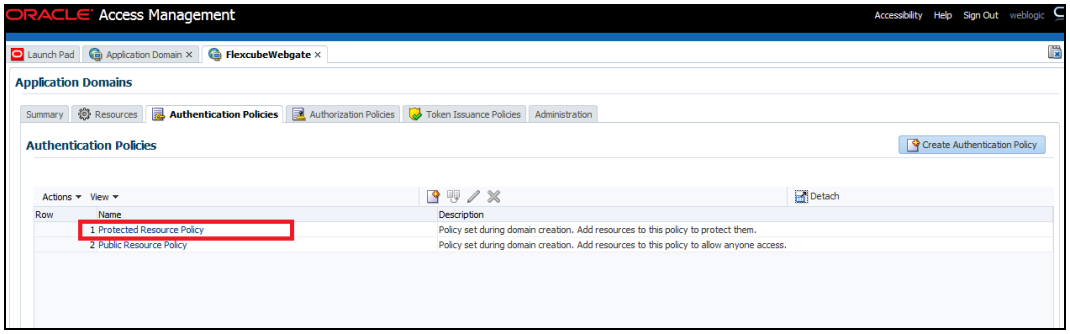




3. Click ‘Authentication Polices’.

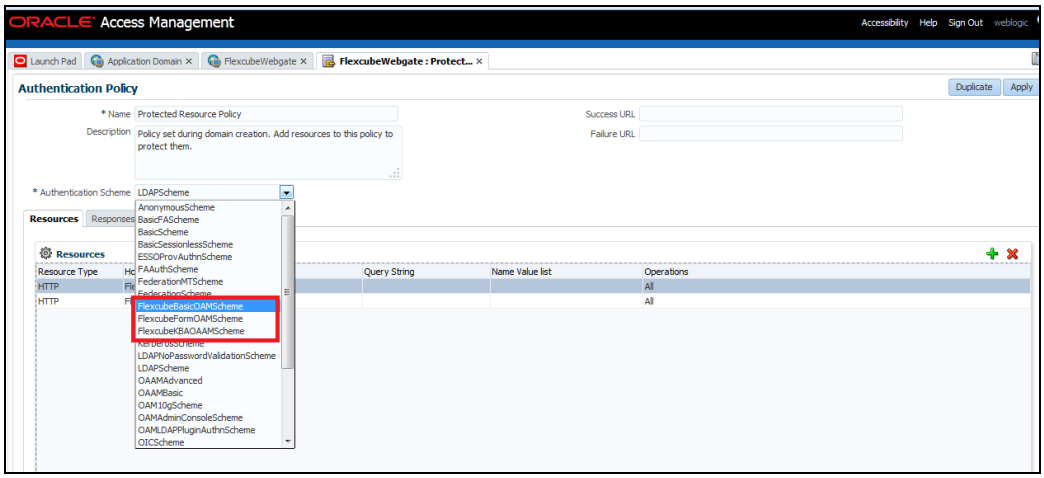


4. Click ‘Protected Resource Policy’.

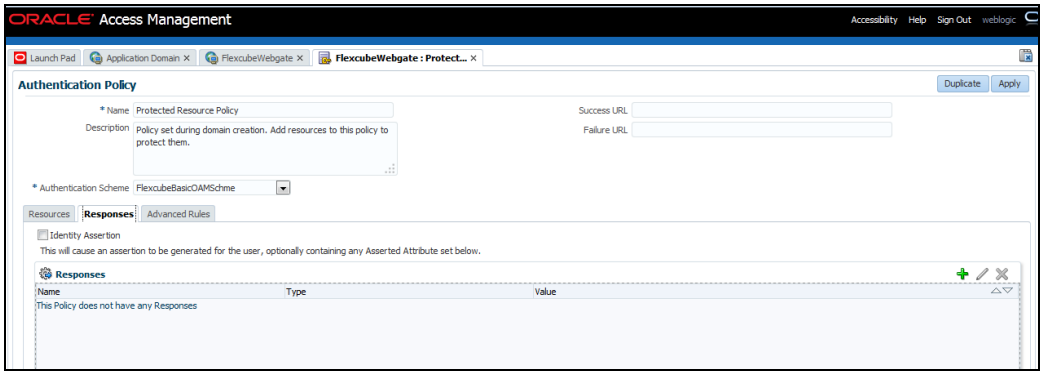


5. Choose the Authentication Scheme created earlier in ‘Creating Authentication Scheme’.

Refer the section ‘Creating Authentication Scheme’ of this document.



6. Click ‘Responses’ tab and click ‘+’ button to Add ‘DN’ variable to the Response Header.

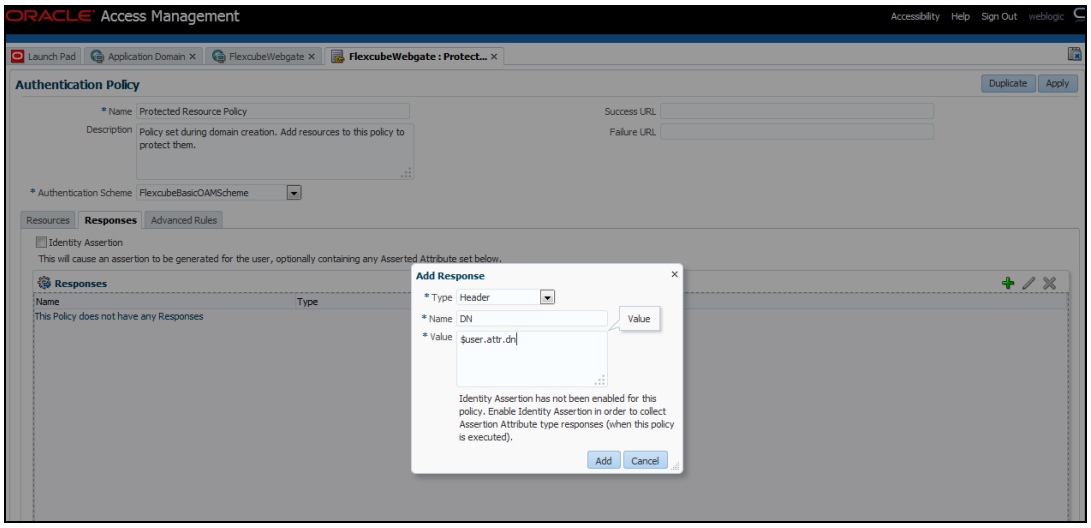


7. Enter the following values in the Add Response Window:

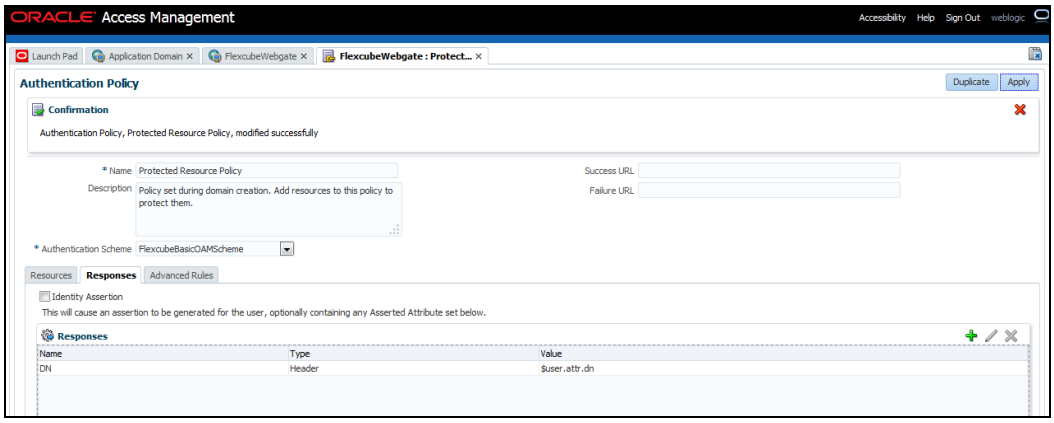
Type : Header

Name : DN

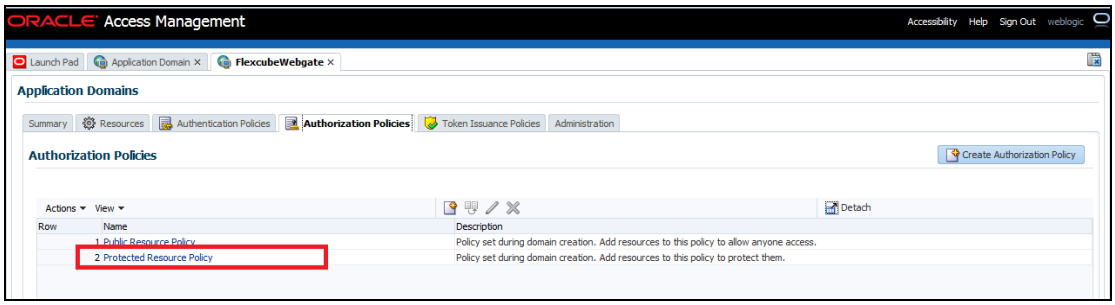
Value : $user.attr.dn



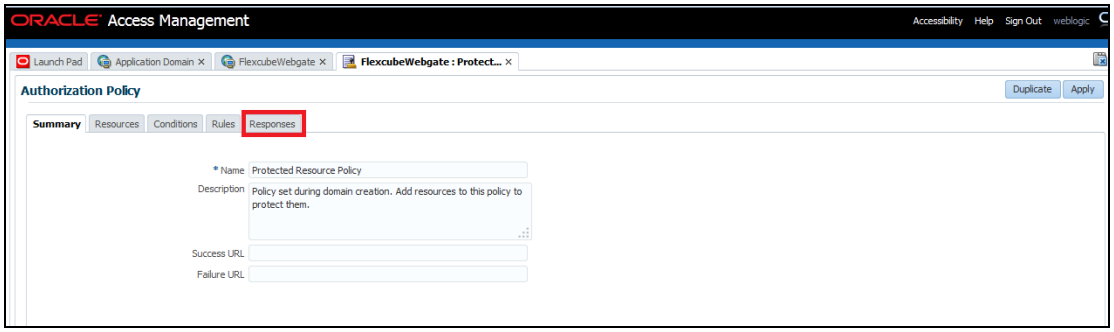
8. Click on Apply to Save the Changes



9. Click ‘Authorization Policies’ and ‘Protected Resource Policy’.



10. Click ‘Response’ and click on ‘+’ button to Add ‘DN’ variable to the Response Header.

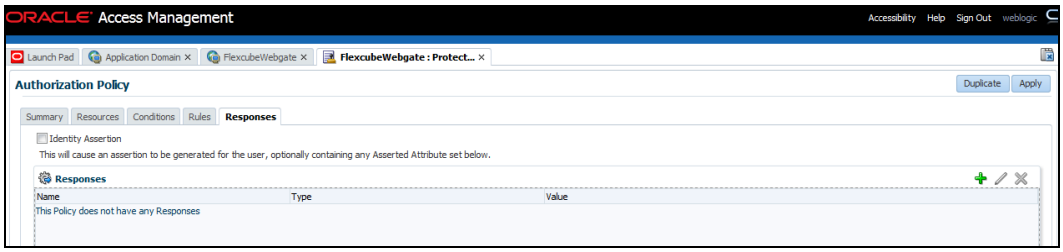


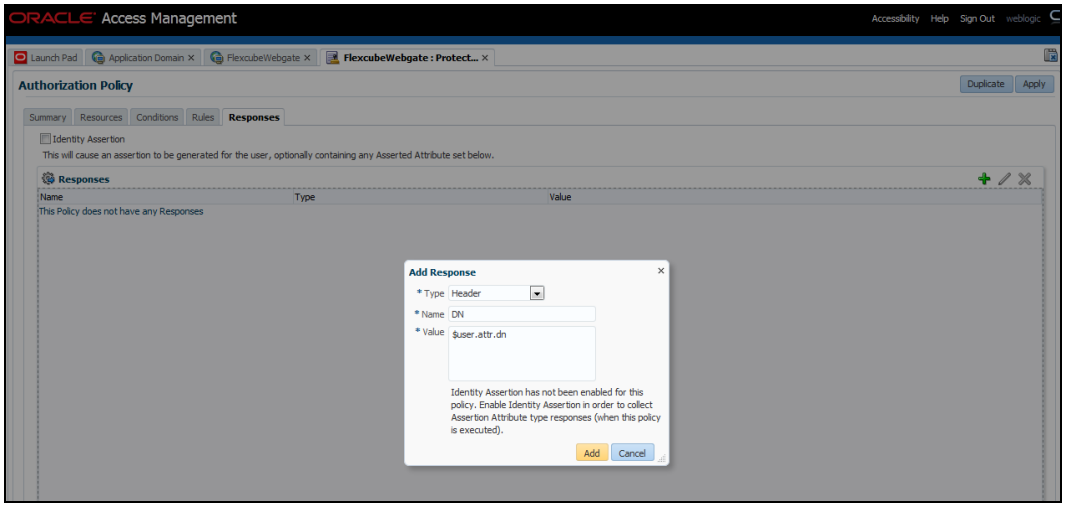
11. Enter the following values in the Add Response Window :

Type : Header

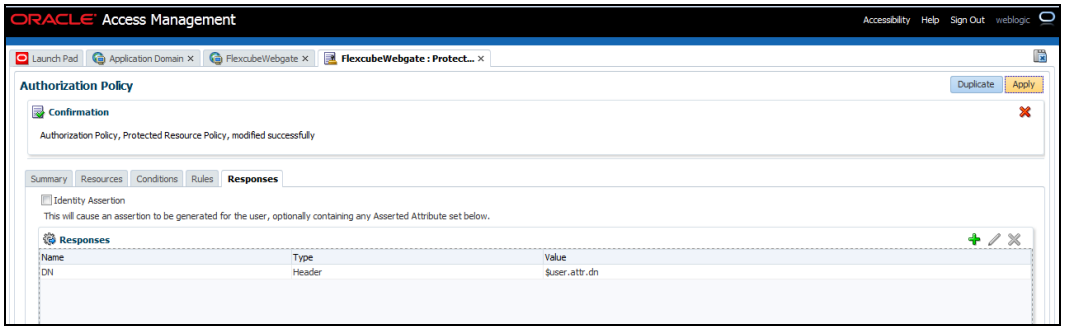
Name : DN

Value : $user.attr.dn





12. Click ‘Apply’ to Save the changes.



2.6.5.2 Copying Generated Files and Artifacts to the Oracle HTTP Server WebGate Instance

Perform the following steps to copy the artifacts generated while creating the Oracle 11g Webgate to the Webgate installation directory:

- Navigate to <DOMAIN_HOME>/output/$WebgateAgentName
- Select the following files

  ObAccessClient.xml

  password.xml

- cwallet.sso

Copy the files to <ORACLE_MIDDLEWARE>/<ORACLE_WIBTIER_HOME> /instances/instance1/ config/OHS/ohs1/webgate/config/

- Select the remaining 2 files

  aaa_key.pem

  aaa_cert.pem

- Copy the files to <ORACLE_MIDDLEWARE>/<ORACLE_WIBTIER_HOME> /instances/instance1/ config/OHS/ohs1/webgate/config/simple

2.6.5.3 Add the Application Certificates to Oracle HTTP Server to work in SSL mode.

Use the ORAPKI tool to import the Flexcube and OAM Server certificates to Oracle HTTP Server. Add <Oracle_MIDDLEWARE>/oracle_common/bin to PATH environment variable and also set JAVA_HOME environment variable. Execute the below command in the command line.

orapki wallet add -wallet <Oracle_MIDDLEWARE>/<ORACLE_WEBTIER_HOME>/instances/instance1/config/OHS/ohs1/keystores/default -trusted_cert -cert <export_certificate_file_name_with_location.cer> -auto_login_only

Note: Certificate has to be imported into OHS Wallet.

2.6.5.4 Configuring mod_wl_ohs for Oracle HTTP server Routing

To enable the Oracle HTTP Server instances to route to applications deployed on the Oracle Weblogic Server, add the directive shown below to the mod_wl_ohs.conf file available in <ORACLE_MIDDLEWARE> /<ORACLE_WEBTIER_HOME>/instances/instance1/config/OHS/ohs1.

<Location /FCJNeoWeb>

SetHandler weblogic-handler

WebLogicHost ofss00002.in.oracle.com

WeblogicPort 7002

WLProxySSL ON

SecureProxy ON

WLSSLWallet "<ORACLE_MIDDLEWARE>/<ORACLE_WEBTIER_HOME>/instances/instance1/config/OHS/ohs1/keystores/default"

</Location>

Note: In the above example, ofss00002.in.oracle.com is the server name where the Flexcube Application is deployed, 7002 is the SSL port and FCJNeoWeb is the context root of the FLEXCUBE application

2.6.5.5 Verify the Webgate 11g Agent Created

After configuring webgate 11g agent , launch the URL https://<hostname>:<ohs_Port>/ohs/modules/webgate.cgi?progid=1 to verify whether the webgate configuration is working fine. If the URL launches a screen as below then the webgate configuration is working fine.

Note *: To enable this option refer Oracle Doc ID: 1624131.1

Access Server	Connection State	Created	Installation Directory	Num Of Threads	Directory Information
ofss220028.in.oracle.com:5575, 1	Up	Friday, January 11, 2013 16:18:27			

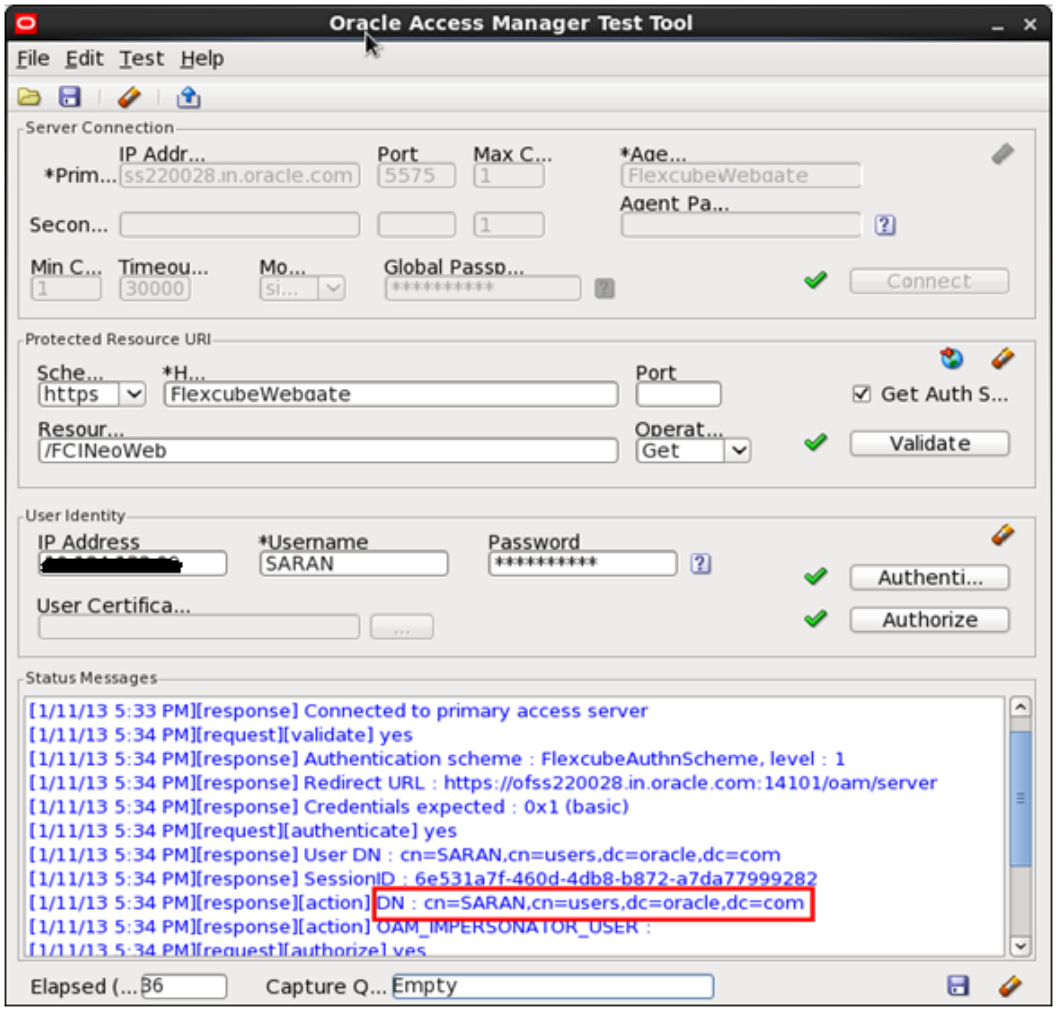
Cache Name	State	Max Elems	Curr Elems	Timeout (seconds)	Cache Stats (Hits:Misses: Expired:Flushed)	Memory Footprint (bytes)
Resource to Authentication Scheme	active	100000	100	1800	6451:273:61:0	59750
Authentication Scheme	active	25	1	1800	15012:34:33:0	802
Resource to Authorization Policy	active	100000	100	1800	381:127:27:0	43200
Authorization Result	active	1000	5	15	372:9:3:0	10845

2.6.5.6 Using OAM Test Tool (This step is not mandatory)

There is a test tool provided in OAM software which helps us to check the response parameter values. The test tool is available in <OAM Install Dir>\ oam\server\tester.

For eg. D:\weblogic\Middleware\Oracle_IDM1\oam\server\tester

Use ***java -jar oamtest.jar*** to launch the OAM test tool.



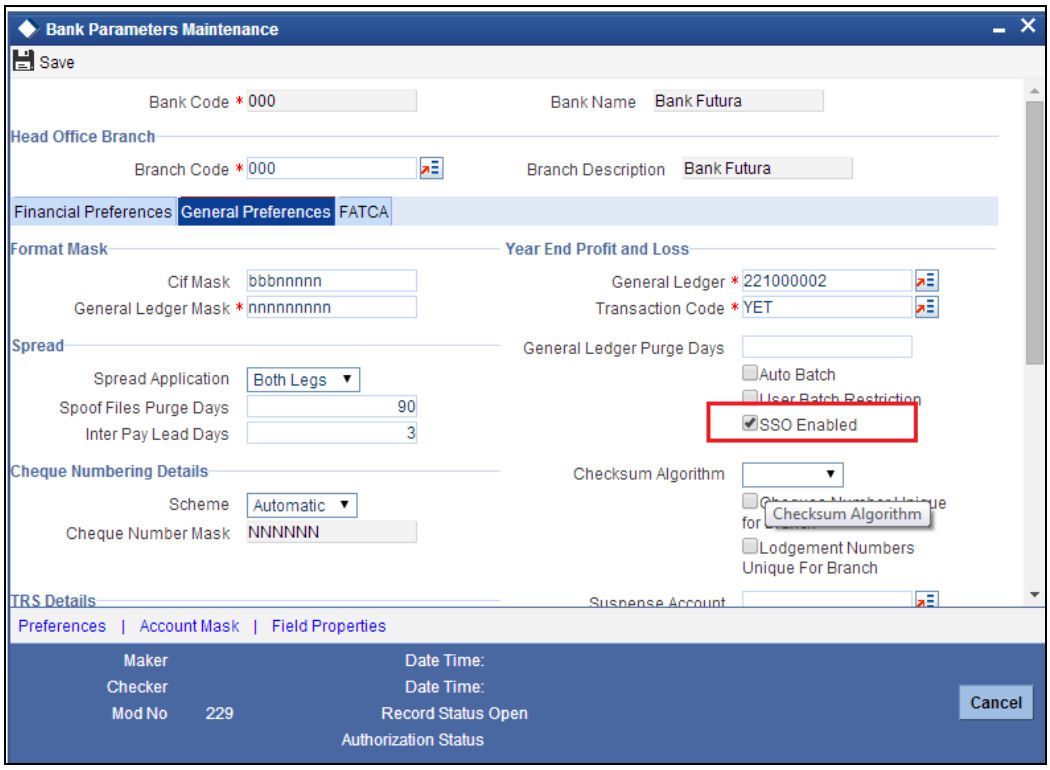
2.7 First launch of FLEXCUBE after installation

After installing FLEXCUBE and while launching it for first time, the normal login screen with userid and password will appear. This is because the bank parameter maintenance will have the value for sso_intalled set to 'N' by default during installation.

2.7.1 Parameter Maintenance

2.7.1.1 Bank Parameter maintenance - IS

To enable SSO in FLEXCUBE IS, login into the application and enable "SSO Enabled" Check box in "Bank Maintenance [SMDBANKP]" screen.



2.7.1.2 Parameters Maintenance – IS

There is no such a screen to maintain the SSO Enabled Parameter in FLEXCUBE Investor Servicing.

2.7.2 Maintaining LDAP DN for FLEXCUBE users

For each user id in FLEXCUBE a user has to be created in the LDAP.

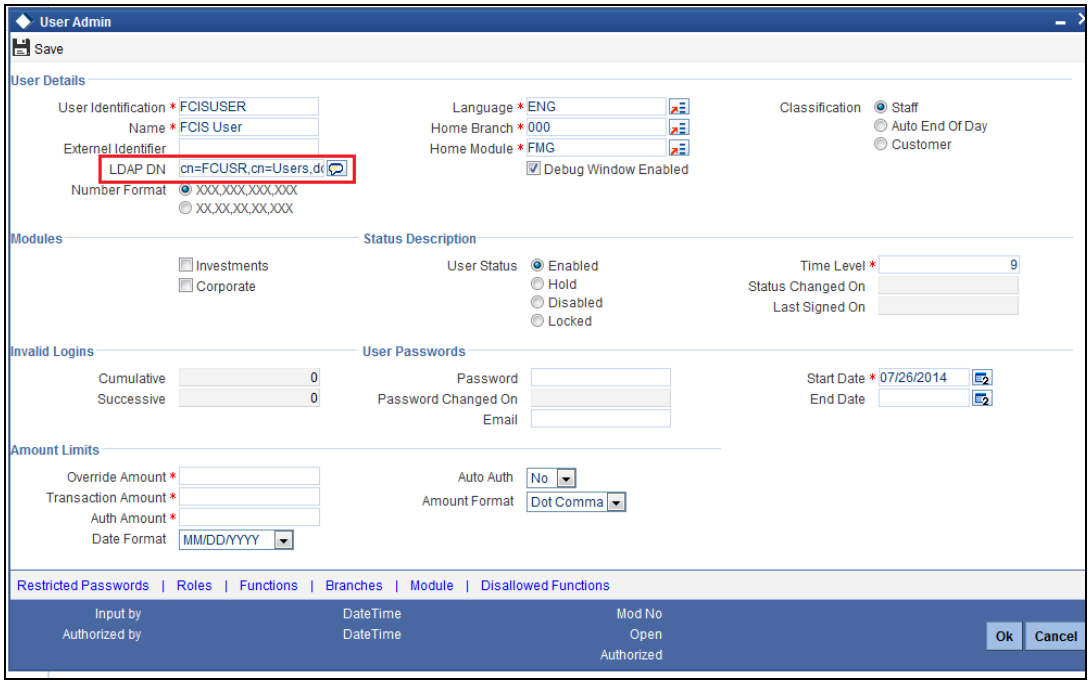
When creating the user in LDAP, ensure that the DN used is same as the LDAP DN value that will be updated in user maintenance form. Once the user is created in LDAP go to the user maintenance form in FCIS. If the FCIS user already exists then unlock the user and update the LDAP DN value which was set when creating the user in LDAP. Click on Validate button to check whether any other user is having the same LDAP DN value.

LDAP DN value should be entered as complete DN value.

eg.

cn=FCUSR,cn=Users,dc=oracle,dc=com

For FLEXCUBE - IS



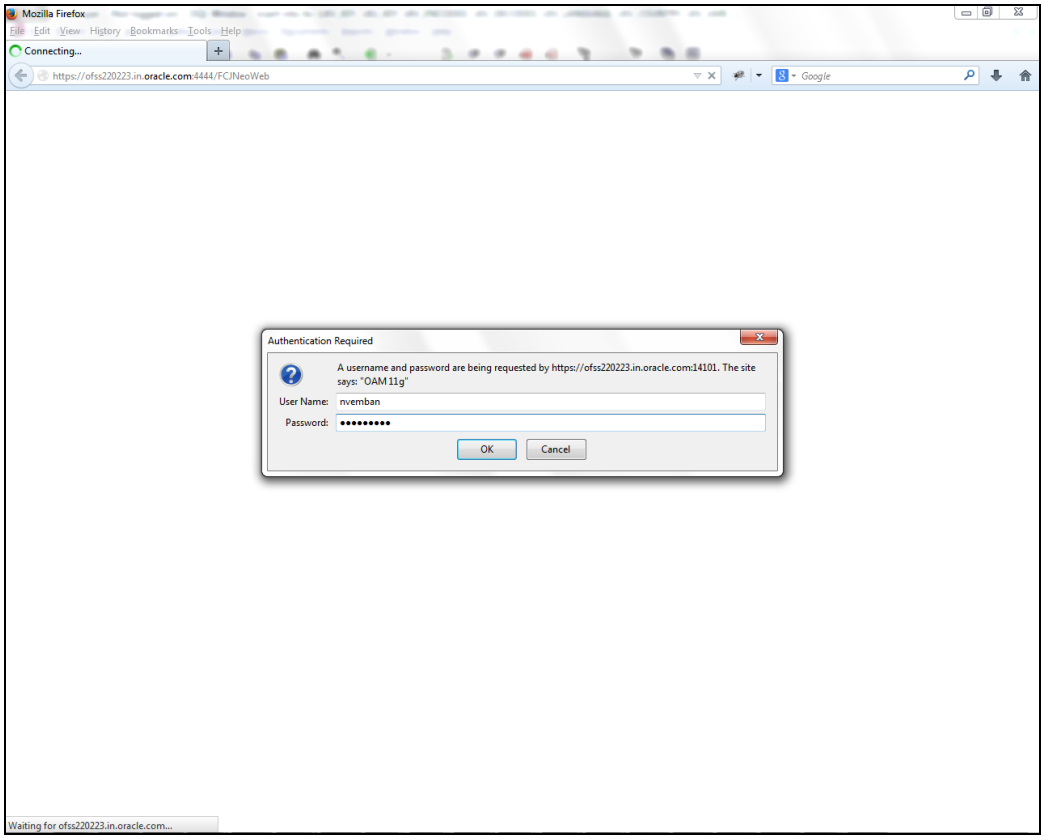
2.7.3 Launching FLEXCUBE

After setting up FLEXCUBE to work on Single Sign on mode, navigate to the URL https://<hostname>:<OHS SSL Port>/<Context Root> from your browser

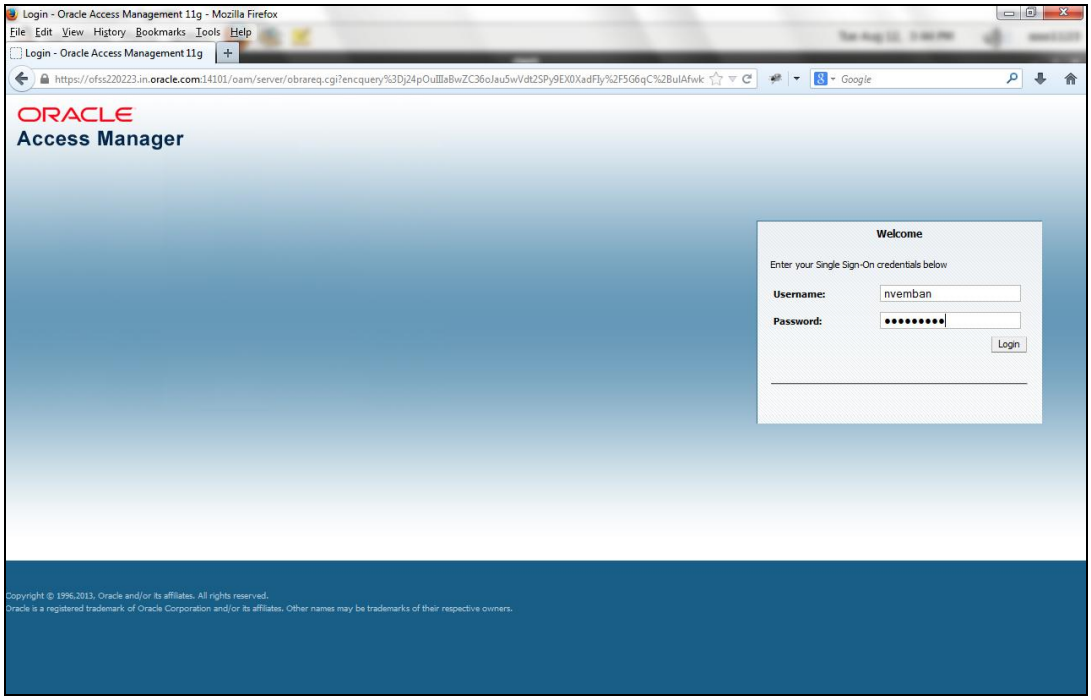
eg: https://ofss00001.in.oracle.com:4443/FCISNeoWeb

Since the resource is protected, the WebGate challenges the user for credentials as shown below.

2.7.3.1 Basic Style Challenge by Webgate



2.7.3.2 Form Style Challenge by Webgate


Login - Oracle Access Management 11g - Mozilla Firefox
File Edit View History Bookmarks Tools Help
Login - Oracle Access Management 11g
https://ofss220223.in.oracle.com:14101/oam/server/obrareq.cgi?encquery%3Dj24pOuIIaBwZC36oJau5wVdt2SPy9EX0XadFly%2F5G6qC%2BuIAfwk
Google
ORACLE
Access Manager
Welcome
Enter your Single Sign-On credentials below
Username:
nvemban
Password:
Login
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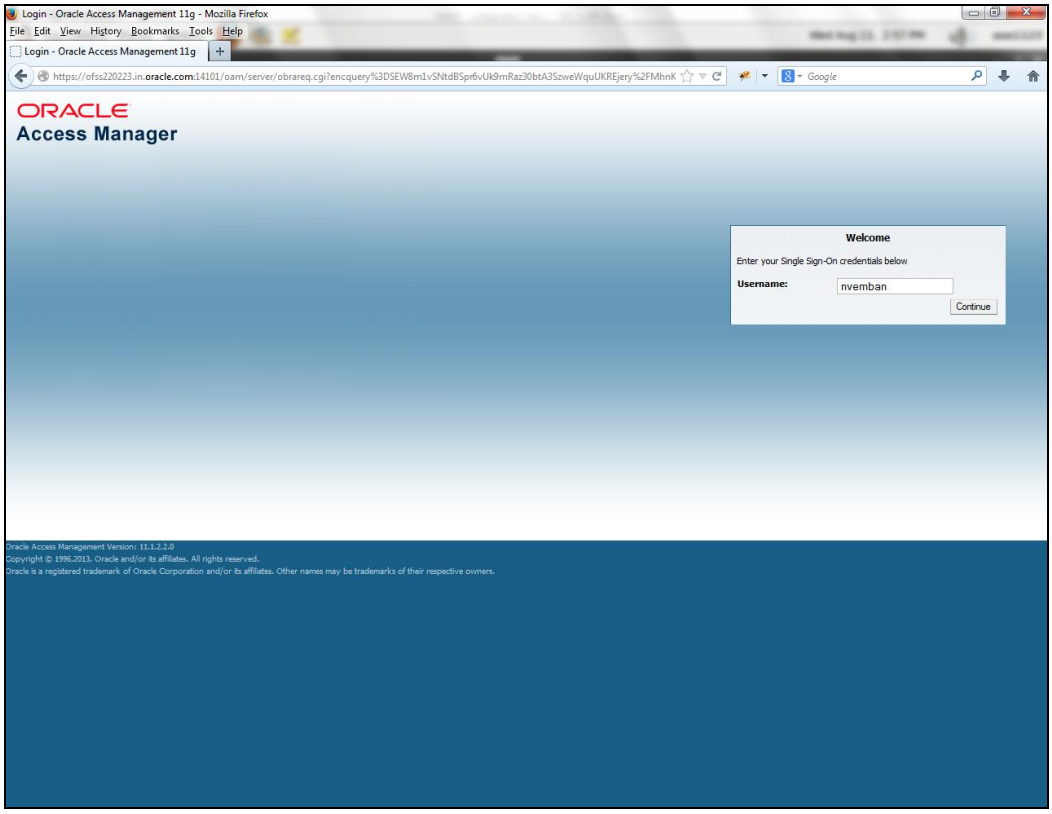
2.7.3.3 KBA Based Strong Authentication Challenge by Webgate(Only when OAAM is used)


Login - Oracle Access Management 11g - Mozilla Firefox
File Edit View History Bookmarks Tools Help
Login - Oracle Access Management 11g
https://ofss220223.in.oracle.com:14101/oam/server/obrareq.cgi?encquery%3DSEW8m1vSNtdBSpr6vUk9mRaz30btA3SzweWquUKREjery%2FMhnK
Google
ORACLE
Access Manager
Welcome
Enter your Single Sign-On credentials below
Username:
nvemban
Continue
Oracle Access Management Version: 11.1.2.2.0
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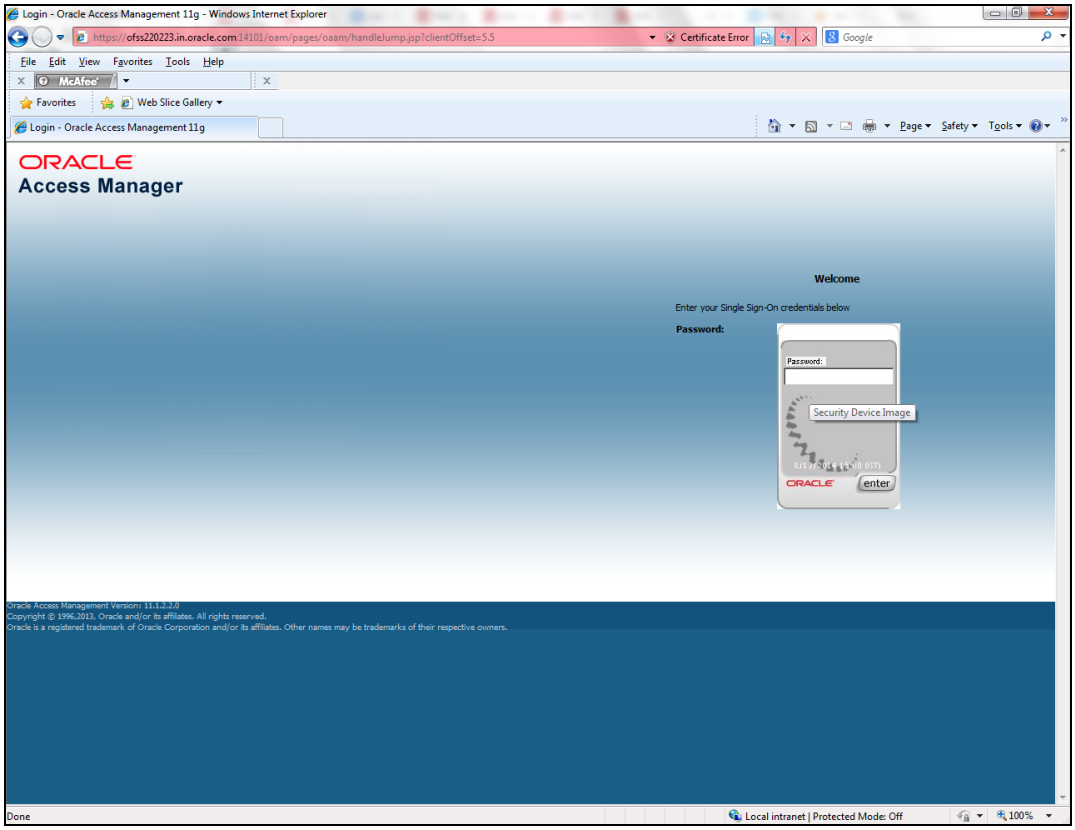
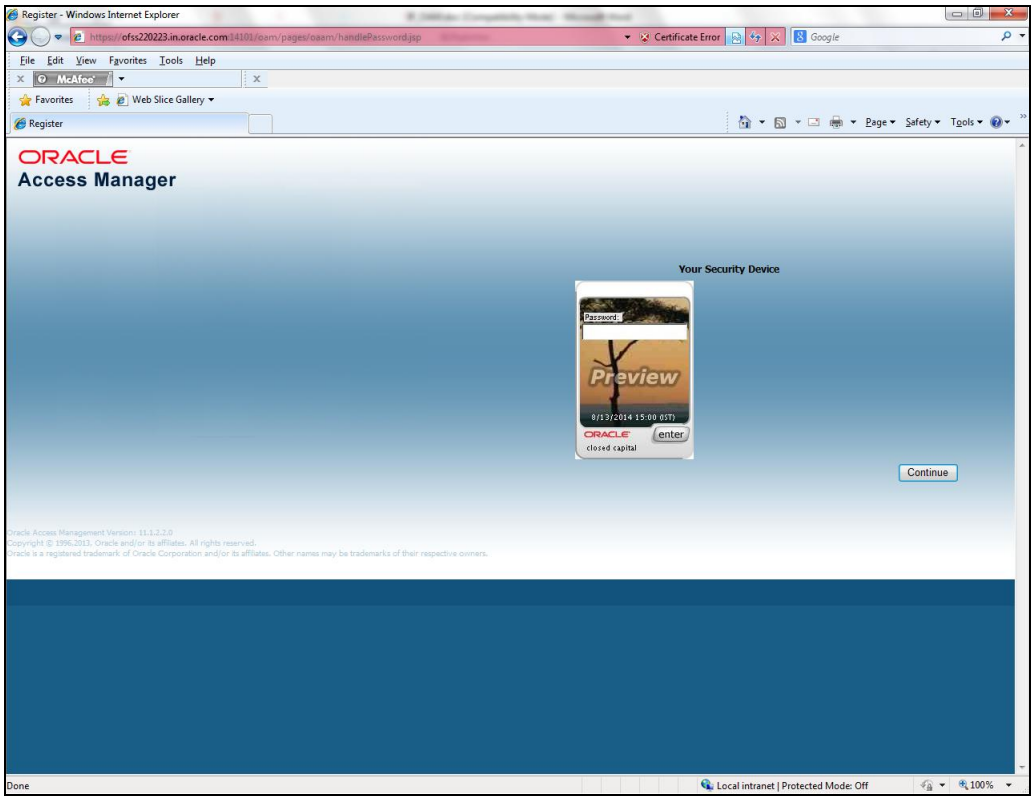
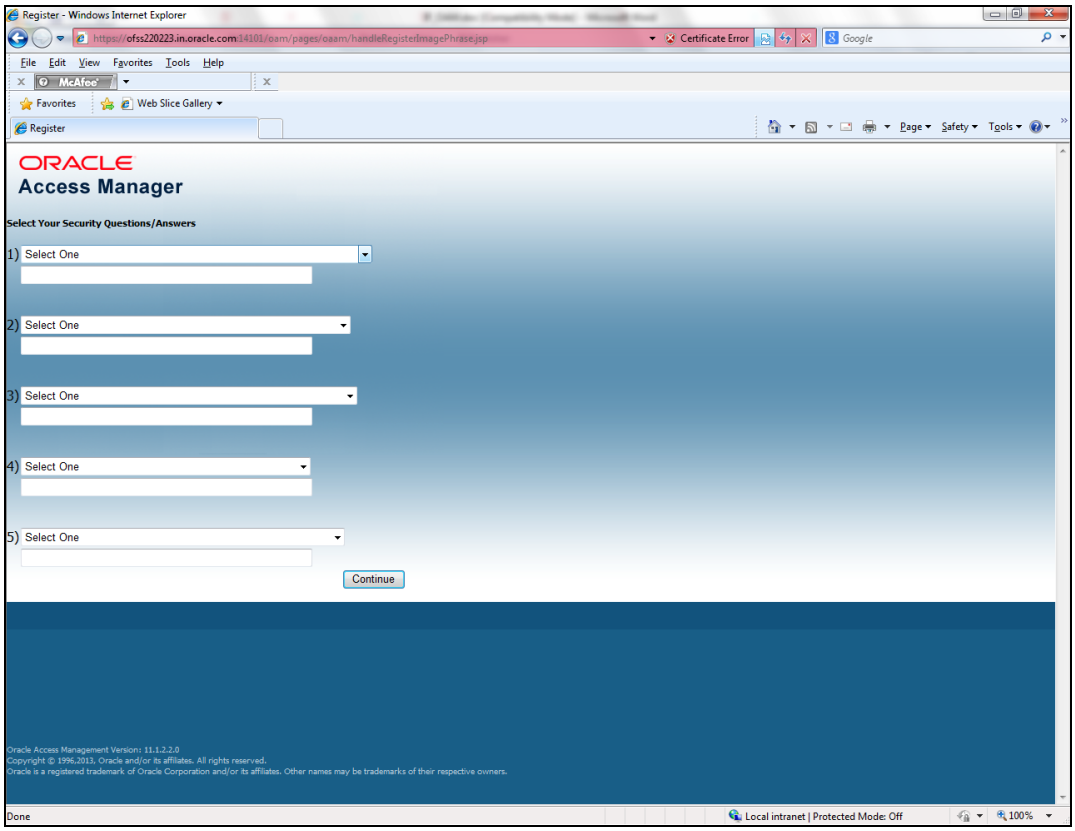
First Time Login






Register - Windows Internet Explorer
https://ofss220223.in.oracle.com:14101/oam/pages/oaam/handleRegisterImagePhrase.jsp
Certificate Error
Google
File Edit View Favorites Tools Help
McAfee
Favorites
Web Slice Gallery
Register
Page Safety Tools
ORACLE
Access Manager
Select Your Security Questions/Answers
1) Select One
2) Select One
3) Select One
4) Select One
5) Select One
Continue
Oracle Access Management Version: 11.1.2.2.0
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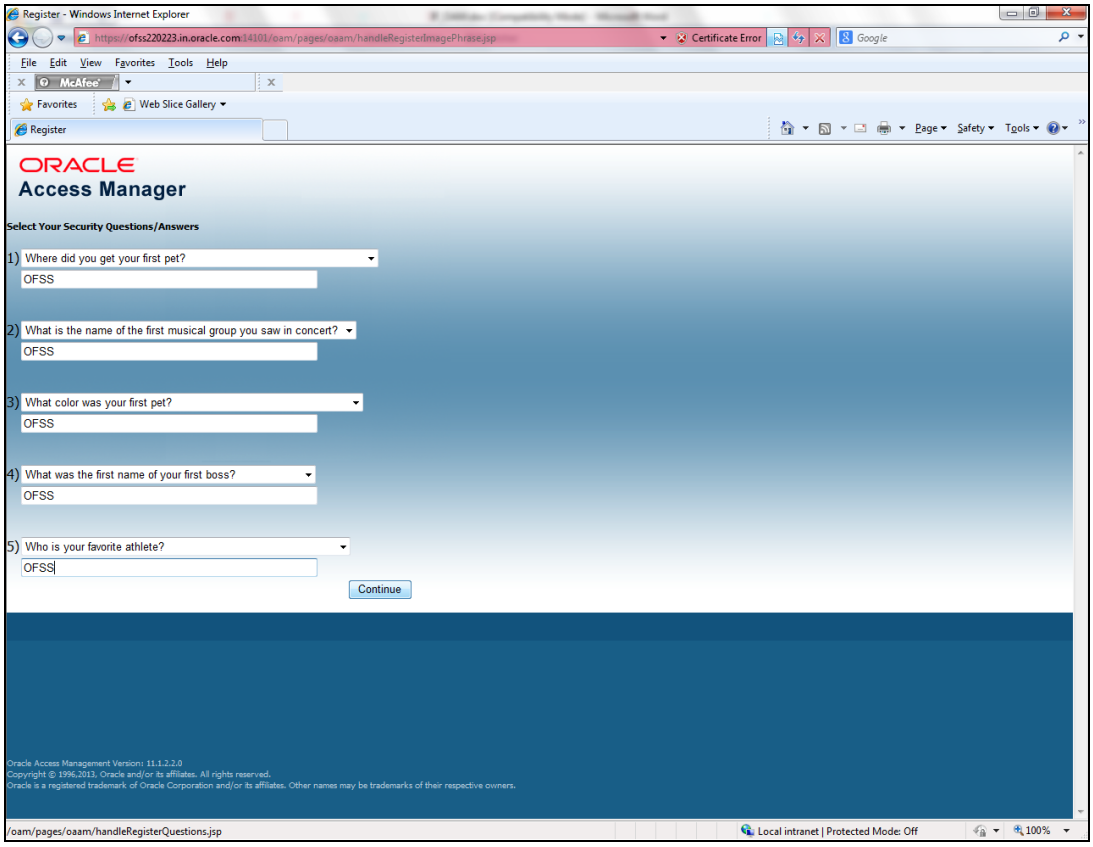
Done
Local intranet | Protected Mode: Off
100%


Register - Windows Internet Explorer
https://ofss220223.in.oracle.com:14101/oam/pages/oaam/handleRegisterImagePhrase.jsp
Certificate Error
Google
File Edit View Favorites Tools Help
McAfee
Favorites
Web Slice Gallery
Register
Page Safety Tools
ORACLE
Access Manager
Select Your Security Questions/Answers
1) Where did you get your first pet?
OFSS
2) What is the name of the first musical group you saw in concert?
OFSS
3) What color was your first pet?
OFSS
4) What was the first name of your first boss?
OFSS
5) Who is your favorite athlete?
OFSS
Continue
Oracle Access Management Version: 11.1.2.2.0
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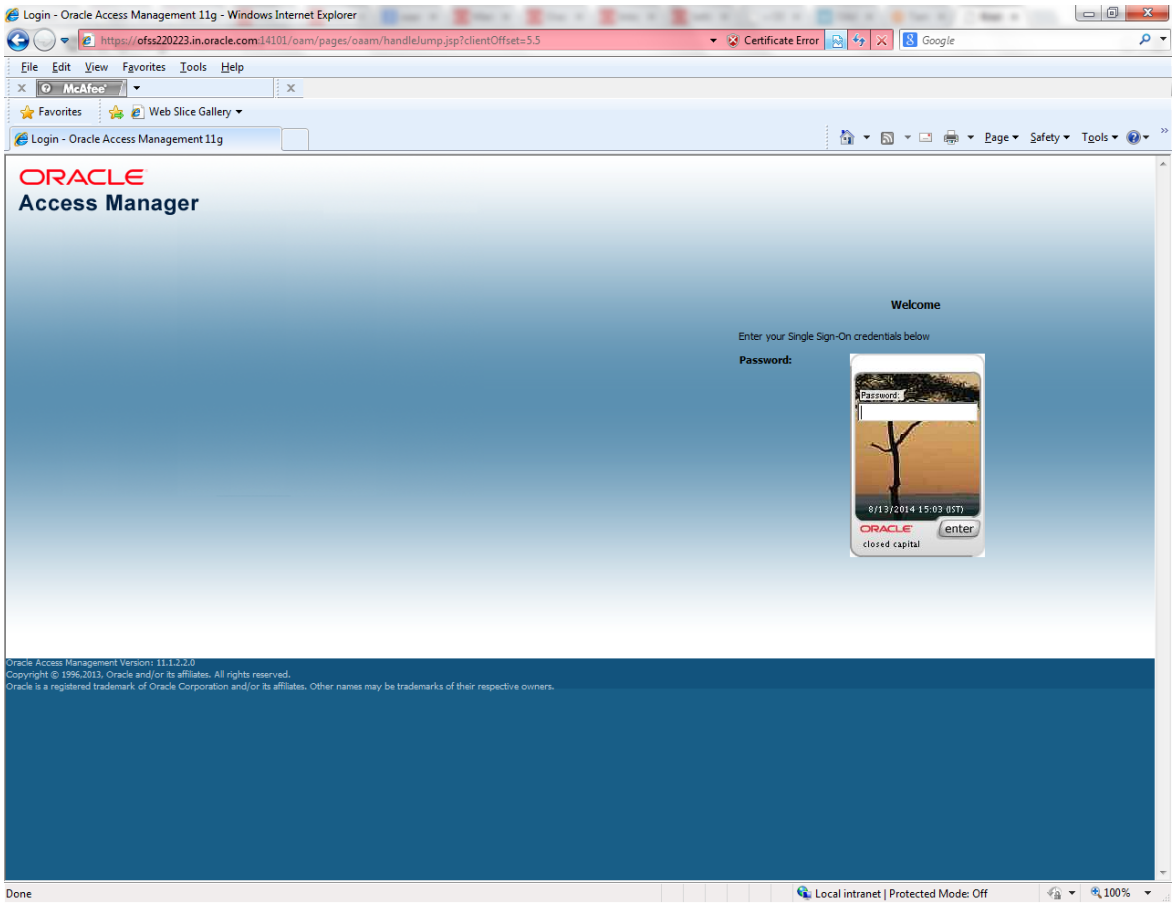
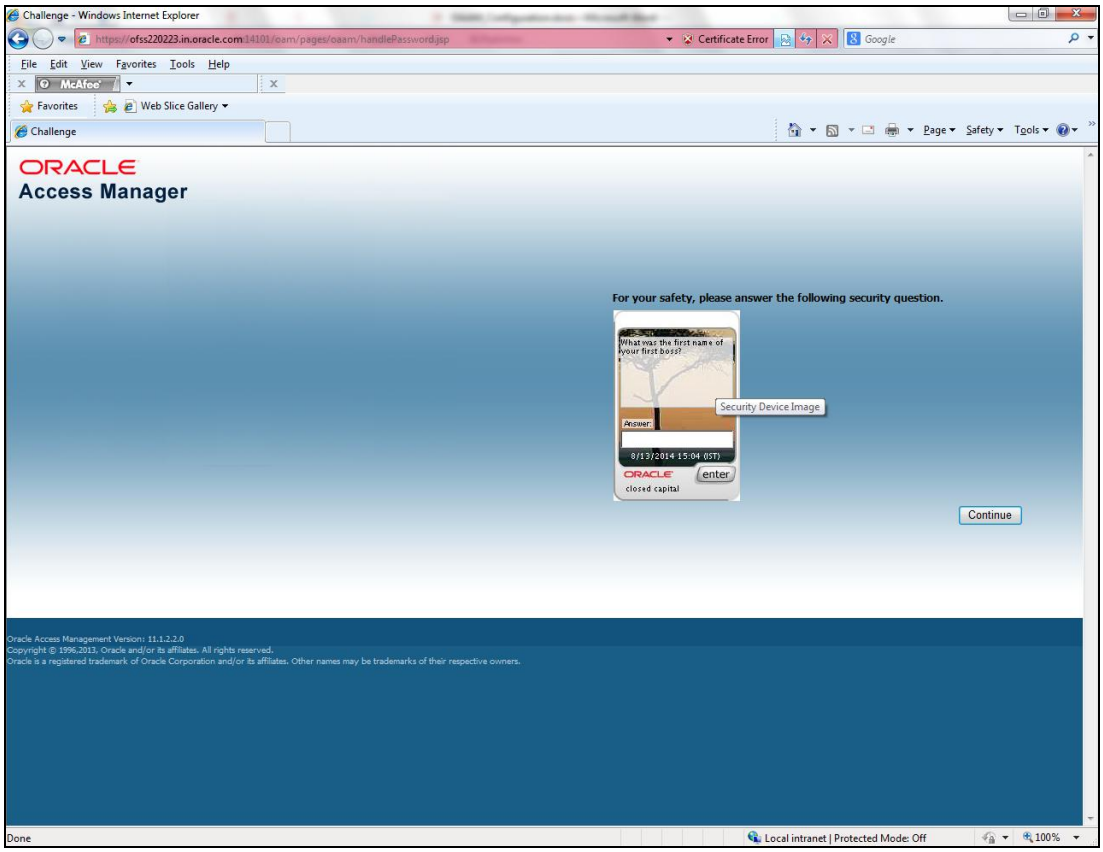
/oam/pages/oaam/handleRegisterQuestions.jsp
Local intranet | Protected Mode: Off
100%

Post First Login




Challenge - Windows Internet Explorer
Certificate Error
File Edit View Favorites Tools Help
Favorites
Web Slice Gallery
Challenge
Page Safety Tools
ORACLE
Access Manager
For your safety, please answer the following security question.
What was the first name of your first boss?
Security Device Image
Answer:
8/13/2014 15:04 (ST)
ORACLE
closed capital
enter
Continue
Oracle Access Management Version: 11.1.2.2.0
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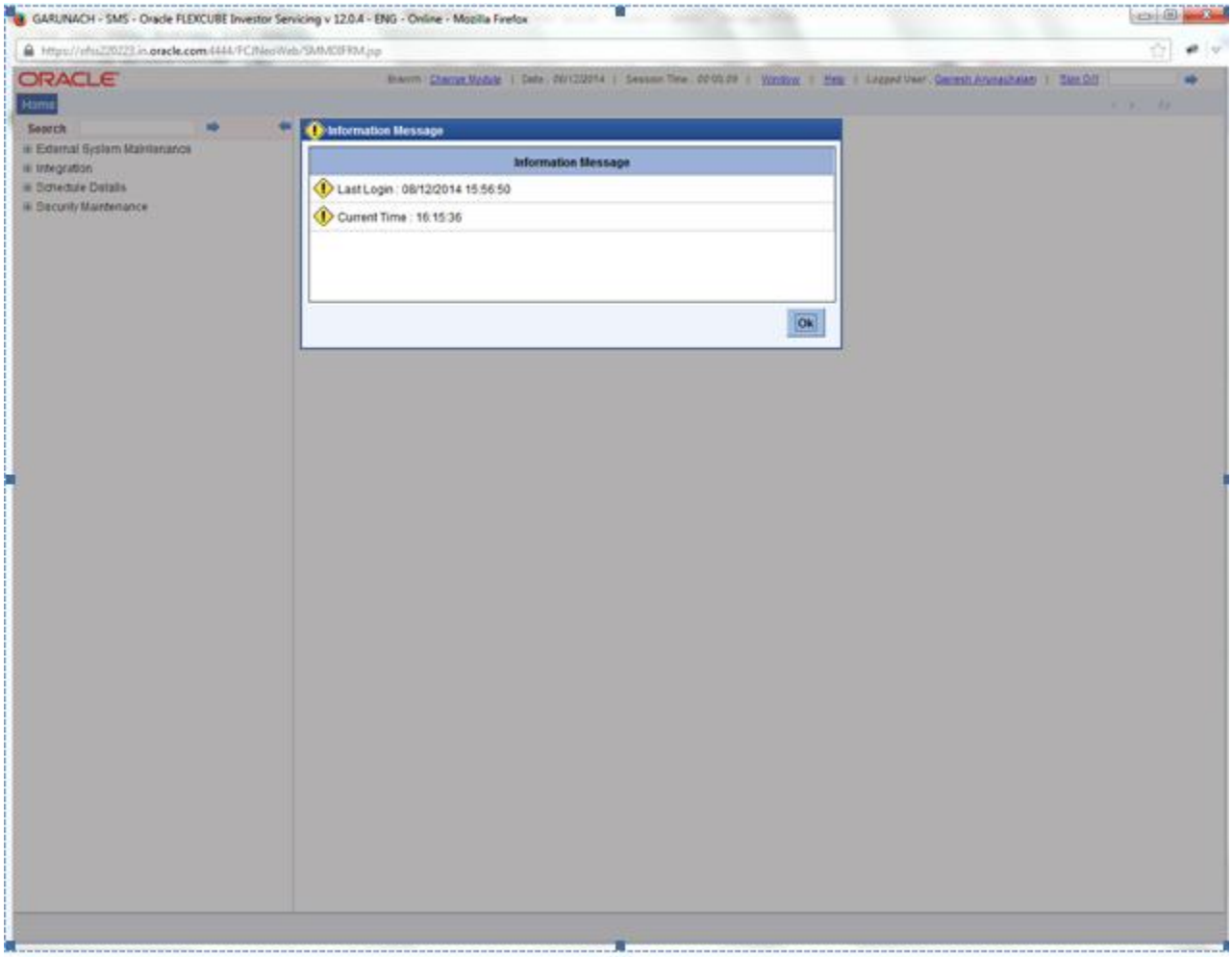
Done
Local intranet | Protected Mode: Off
100%

Once the user is authenticated and authorized to access the resource, the request gets redirected to normal FLEXCUBE application and it will take the user to Home Branch.

2.7.3.4 After SSO Login FLEXCUBE Application launch - Home Branch / Module



2.7.4 Signoff in a SSO Situation

FLEXCUBE does not provide for single signoff currently, i.e., when a user signs off in FLEXCUBE, the session established with Oracle Access Manager by the user will not be modified in any manner.

In a SSO situation the “Exit” and “Logoff” actions in FLEXCUBE will function as “Exit”, i.e., on clicking these, the user will “exit” FLEXCUBE and will need to re-launch FLEXCUBE using the FLEXCUBE launch URL.

Oracle Access Manager Integration
[September] [2014]
Version 12.0.4.0.0

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